
RAILWAY AGE
FOR ALMOST A CENTURY
APRIL 9, 19
5
Copy
Completely dieselized since May 1, 1950, the Chicago and Eastern Illinois Railroad is handling 100% of its freight and passenger traffic with General Motors locomotives. Pulling 25% more ton-miles than steam, GM Diesels are showing a 33% saving in through-freight service. Sixteen years and more than two billion unit miles of experience have proved that dieselization with General Motors locomotives is one of the soundest investments railroads can make.
ELECTRO-MOTIVE DIVISION
GENERAL MOTORS • LA GRANGE, ILLINOIS
HOME OF THE DIESEL LOCOMOTIVE
In Canada: GENERAL MOTORS DIESEL, LTD., LONDON, ONTARIO
GENERAL MOTORS
LOCOMOTIVES

REDUCE "HOT-BOXES"

TEXACO TEXAYCE OIL more than meets the new A.A.R. all-year car oil specification

ON ILLINOIS CENTRAL'S 100th BIRTHDAY, Texaco salutes a great railroad on its century of splendid progress. Texaco is proud to have served the Illinois Central through many of those years . . . proud that so many Texaco lubricants are now in use on this road. *Texaco Texayce Oil,* for example, is used exclusively on the Illinois Central's electrified suburban equipment.

YOU'LL HAVE far fewer interruptions in service . . . far less maintenance cost . . . when *Texaco Texayce Oil* stands guard against "hot boxes." This *all-year* car and engine oil has been thoroughly time-tested through close to a quarter century of service on leading railroads. *Texaco Texayce Oil* more than meets the new, restrictive A.A.R. specifications . . . does away with separate summer and winter grades.

Texaco Texayce Oil is carefully made from selected stocks . . . has a very low pour point and proper viscosity to assure year-'round protection. Use it for both car and engine journals, oil-lubricated reciprocating parts on locomotives, and other friction points.

For grease-lubricated roller bearings in freight and passenger cars, use *Texaco Roller Bearing Grease.* It gives the roller full summer-and-winter protection against wear and rust . . . won't leak out of journal boxes.

For traction motor gears, use *Texaco Crater.* Its tough, long-lasting lubricating film wards off wear and cushions load shocks. Assures smoother operation, longer gear life, and lower maintenance costs.

Let a Texaco representative tell you about the complete line of Texaco Railroad Lubricants and about Texaco's unique Systematic Engineering Service. Just call the nearest Railway Sales office listed below, or write:

☆ ☆ ☆

The Texas Company, *Railway Sales Division,* 135 East 42nd Street, New York 17, N. Y.

NEW YORK ★ CHICAGO ★ SAN FRANCISCO ★ ST. PAUL ★ ST. LOUIS ★ ATLANTA

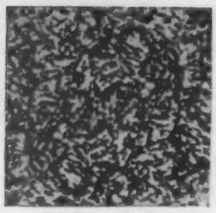
TEXACO REG'T M.

TEXACO Texayce Oil

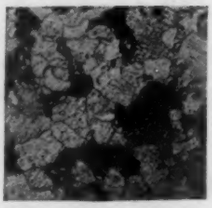
ALL-YEAR CAR AND ENGINE OIL

TUNE IN . . . TEXACO STAR THEATER starring MILTON BERLE on television every Tuesday night. See newspaper for time and station.

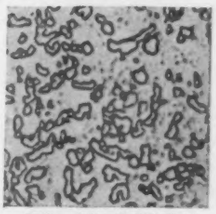
How to select grain structures for better machinability of alloy steels



Sorbitic, Med. C

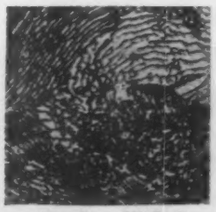


Blocky Ferrite, Low C

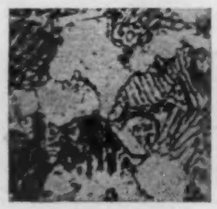


Spheroidized, High C

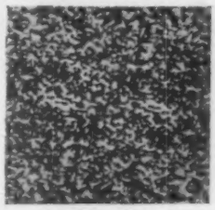
Spheroidized, Med. C



Lamellar, High C



Lamellar, Med. C



Sorbitic, High C

The combination of grain structure, ductility and hardness has, in general, much to do with the degree of machinability of an alloy steel.

For purposes of comparing different types of machinability, all alloy steels may be grouped in three carbon ranges: low carbon, .08 to .30 pct; medium carbon, .30 to .50 pct; and high carbon of .50 to .80 pct.

Each of these ranges must be considered separately, as each has a pronounced effect on the corresponding grain structure and machining properties. Certain grain structures may be well suited for one type of machining and at the same time wholly unsuited for others. For example, in a medium carbon range, an alloy steel with a spheroidized structure may be good for turning operations, poor for forming, fair for drilling, and poor for broaching. This, of course, means that a compromise must usually be accepted to get the most economical overall machinability in any one grade of steel.

The table shown here is a suggested guide. It contains various combinations of carbon range, heat-treating process and structure believed to be most suitable for each type of machining.

Our metallurgists will gladly furnish further information on the relative machinability of various alloy grades. Call or write for this information.

Bethlehem is a dependable source for all of the AISI alloy steels as well as the full range of carbon grades and special steels.

BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. Export Distributor: Bethlehem Steel Export Corporation

CARBON RANGE	PROCESS	STRUCTURE	TURNING	FORMING	DRILLING	BROACHING
LOW (C .08 to .30)	Normalize or Anneal	Blocky Ferrite	Good	Good	Good	Good
MEDIUM (C .30 to .50)	Anneal	Spheroidized	Good	Poor	Fair	Poor
MEDIUM (C .30 to .50)	Anneal	Lamellar	Fair	Good	Good	Good
MEDIUM (C .30 to .50)	Heat Treat	Sorbitic	Fair	Fair	Fair	Fair
HIGH (C .50 to .80)	Anneal	Spheroidized	Good	Good	Good	Fair
HIGH (C .50 to .80)	Anneal	Lamellar	Fair	Poor	Poor	Poor
HIGH (C .50 to .80)	Heat Treat	Sorbitic	Good	Fair	Good	Good

BETHLEHEM ALLOY STEELS

BETHLEHEM STEEL

A Basic Standard Equipment for Switching Locomotives

Overspeed Protection

Specify Westinghouse

6 SL EQUIPMENT

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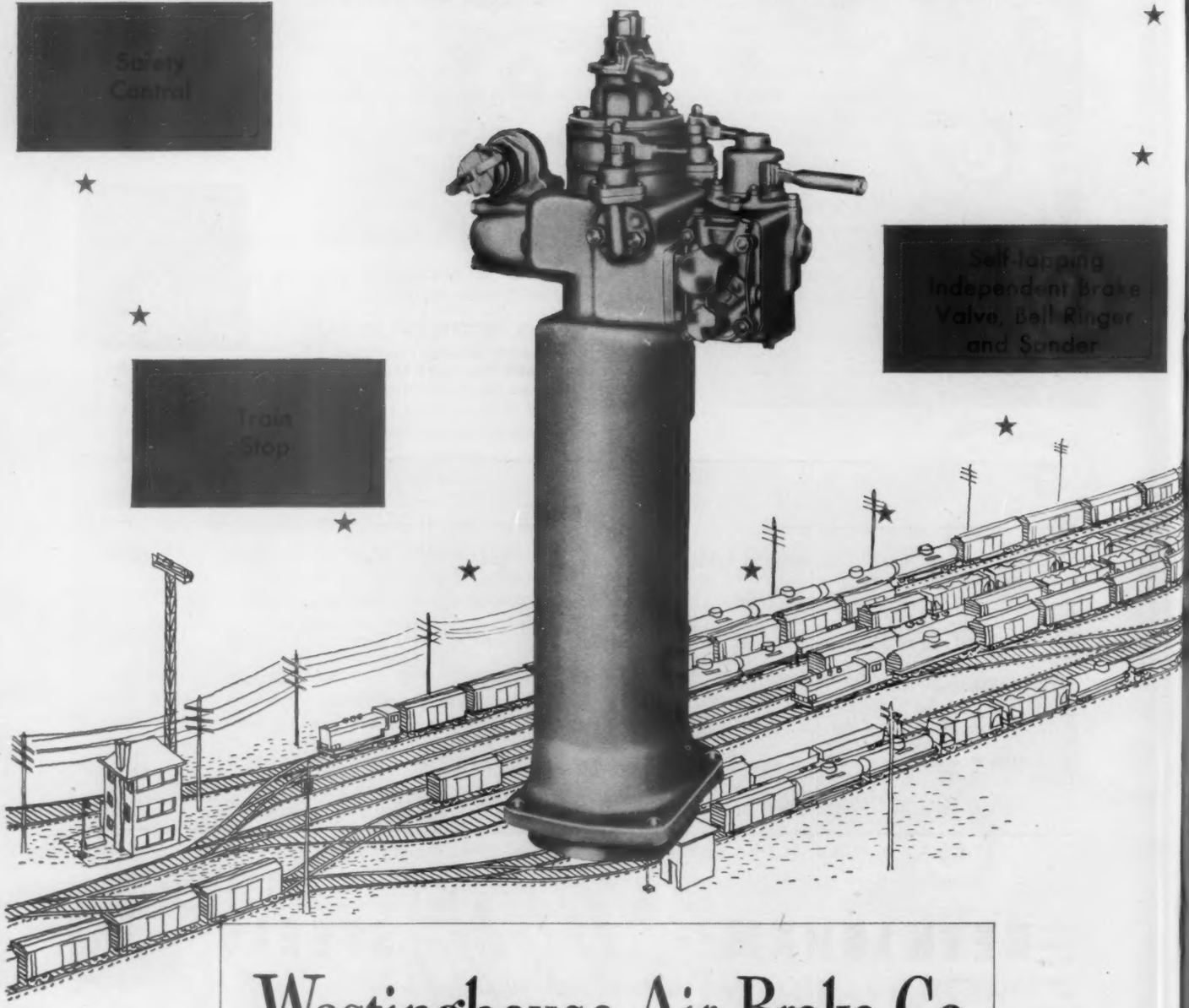
from Diesel-Electric Switchers

Safety Control

Self-lapping Independent Brake Valve, Bell Ringer and Sander

Train Stop



Westinghouse Air Brake Co.

WILMERDING, PA.

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Railway Engineering & Maintenance Cyclopedia American Builder
Marine Engineering & Shipping Review Marine Catalog & Buyers' Directory
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"UNION" UR INTERLOCKING

SPEEDS TRAIN ROUTING at WESTCHESTER YARD

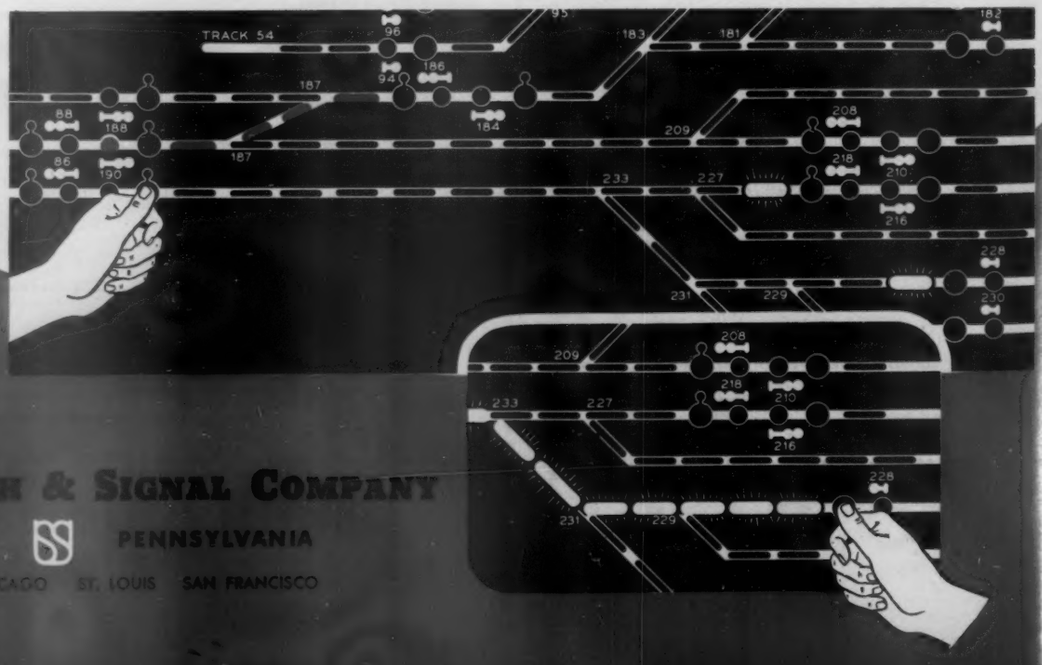
At the New York Board of Transportation's Westchester Yard, traffic density during rush hours reaches 40 trains per hour on the two local main tracks, and 20 trains per hour on the express track.

With such close headways . . . and due to the large size and complexity of the track layout . . . route interlocking was chosen as the fastest, most efficient means of routing trains between the main track and the 48 yard tracks.

The "Union" UR Interlocking installed at Westchester provides exceptional operating simplicity. Complicated routes can be established with maximum speed, and train delays are minimized.

This "Union" UR Interlocking is the largest route interlocking in the world . . . includes 60 home signals, 11 approach signals, 51 dwarf signals and 75 switches. But remember . . . UR Interlockings may also afford outstanding advantages at the smallest layouts, where the simplicity of operation may make part of the operator's time available for other duties. Ask any of our district offices for detailed information and recommendations.

To set up a route, the operator merely presses a button corresponding to the signal where the train enters the route, and another corresponding to the leaving point.



UNION SWITCH & SIGNAL COMPANY

SWISSVALE PENNSYLVANIA

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

WEEK AT A GLANCE

LAST CHANCE? As might be expected, the epidemic of "sickness" among railroad operating employees early in February had its inevitable aftermath in a sharp reduction of railroad earnings for the month. Actually, on an industry-wide basis, there was no net income at all, but a deficit of $3 million; as shown by detailed figures in the news pages, small net incomes in the South and West were overbalanced by a $16-million loss in the East. This sharp—and, we trust, only temporary—cut in railroad earnings serves, however, the useful purpose of bringing into sharp focus the importance of the facts brought out in our leading editorial (page 35). It is there stated, as this paper has repeatedly declared in the past, that the *basic* problem of restoring a dependable level of good earnings for the long term has not even been touched, while the railroads' competitive and labor relations situations have grown progressively worse. Now, if ever, says the editorial, is the time for all concerned—railroaders, suppliers, shippers and informed sections of the public—to attack and to solve those fundamental problems. The present fortuitous upturn of traffic and earnings (excluding February) provides the opportunity. There may never be another!

SUPERCHARGE: Twice a year, the Harvard Business School conducts special three-month courses for business and industrial executives—men who have already attained a high degree of success in their chosen fields but who may attain even greater success with a "supercharge" of modern managerial knowledge as it affects their business as a whole. A number of railroads have in recent years assigned some of their more promising officers to take this intensive training. But more railroads might profitably do so—with direct benefit to the men and to the companies and with the added indirect advantage of bringing the railroad viewpoint on many problems to the direct personal attention of actual or potential leaders in other businesses. These H. B. S. courses are the subject of this issue's first feature article (page 38).

"MAKE-WORK" RULES MUST GO! Oregon's Senator Morse has given every evidence of being a good friend of organized labor. In consequence, his statement, quoted in the news, that "labor never gains in the long run by hanging onto rules that are economically unsound" should carry far more weight than it probably will with the chronically short-sighted leadership of the rail brotherhoods. The brothers shouldn't, he said, "be allowed to keep rules that really are make-work rules" which "can't be reconciled with efficient operation of the railroads."

TEACHING TEACHERS: Valuable as they unquestionably are, the Harvard Business School courses described on page 38 can't possibly fulfill all of the railroad industry's multifold needs for specialized training of its personnel in many different fields. One of its biggest needs right now is to obtain adequate indoctrination for the men who will run and maintain the enormous numbers of new diesel locomotives currently going into service; about 15,000 railroaders, it is estimated, will work on diesels for the first time in 1951. Necessarily, the burden of training has so far fallen largely on diesel locomotive builders, one of which—Electro-Motive—has recently established an advanced 60-day course for railroad men who show special promise of developing into qualified diesel instructors. This course, so intensive that it is limited to four men at a time and so extensive that it ranges from specialized practical shop work to actual practice as an instructor, is described on pages 41-44.

DIESELS—AND OBSOLESCENCE: Rapid dieselization of the railroads has brought with it almost incalculable benefits—but it has also brought more than a few problems. One of these—the training of diesel operators and maintainers—is discussed, in some of its phases, in the article starting on page 41; another—the effect of dieselization on obsolescence of facilities used in servicing and repairing steam locomotives—is the subject of another feature article, which begins on page 45. This latter article is adapted from an address presented to the recent meeting of the A. R. E. A. by J. B. Akers, chief engineer of the heavily dieselized Southern system, which, like many other railroads, naturally wants to recover as much as possible of the capital it has invested in steam facilities.

PROOF OF THE PUDDING: Beyond any reasonable question, rapid dieselization and extensive installations of centralized traffic control have both contributed mightily—perhaps more than any other factors—to keeping the railroads going in the face of intensive subsidized competition and steadily rising unit costs. Proof of that statement continues to pile up at a rapid rate; more is added by two feature articles in this issue. One, beginning on page 50, describes the benefits which dieselization has brought to two southern short lines—the Live Oak, Perry & Gulf and the South Georgia. The other, starting on page 52, tells how one of the world's largest railroads—the Canadian National—has saved hours of train time and increased track capacity—by use of C.T.C. on 117 miles of busy single track between Ste. Rosalie, Que., and West Junction.

NEWS ROUND UP: Shippers boards predict 6.5 per cent increase in second quarter car loadings, compared with corresponding period of 1950.—Ohio Senate shelves Riverlake Conveyor Belt bill.—I. C. C. revises car-movement orders.—Nickel Plate common stock to be split 5-for-1.—Lehigh Valley orders two Budd RDC-2s.—V. H. Peterson becomes vice-president—railroad sales of Fairbanks, Morse & Co.—Wood-Preservers' Association, American Railway Development Association announce programs for annual meetings.—I. C. C. orders grain rate increase delayed.—Bi-monthly list of meetings and conventions.—Post Office announces new mail truck routes.—D. T. A. plans "tailored" loading orders.—Locomotive inspectors wanted!

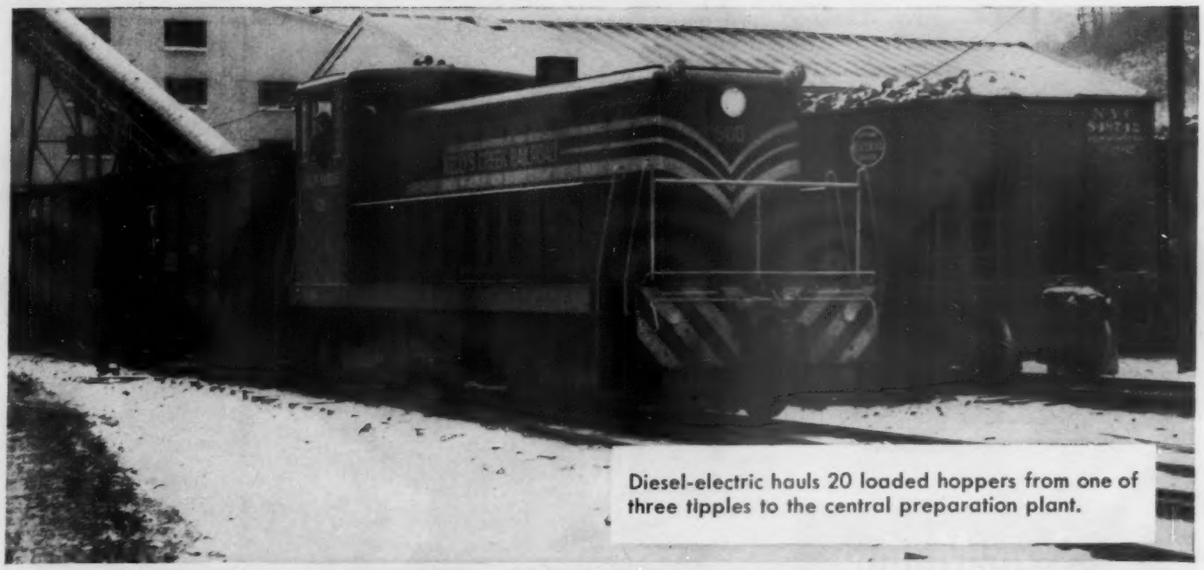
95% AVAILABILITY
30% SAVINGS

TWO G-E 70-TON DIESEL-ELECTRICS ARE PROVING PREDICTED PERFORMANCE FOR KELLY'S CREEK RAILROAD

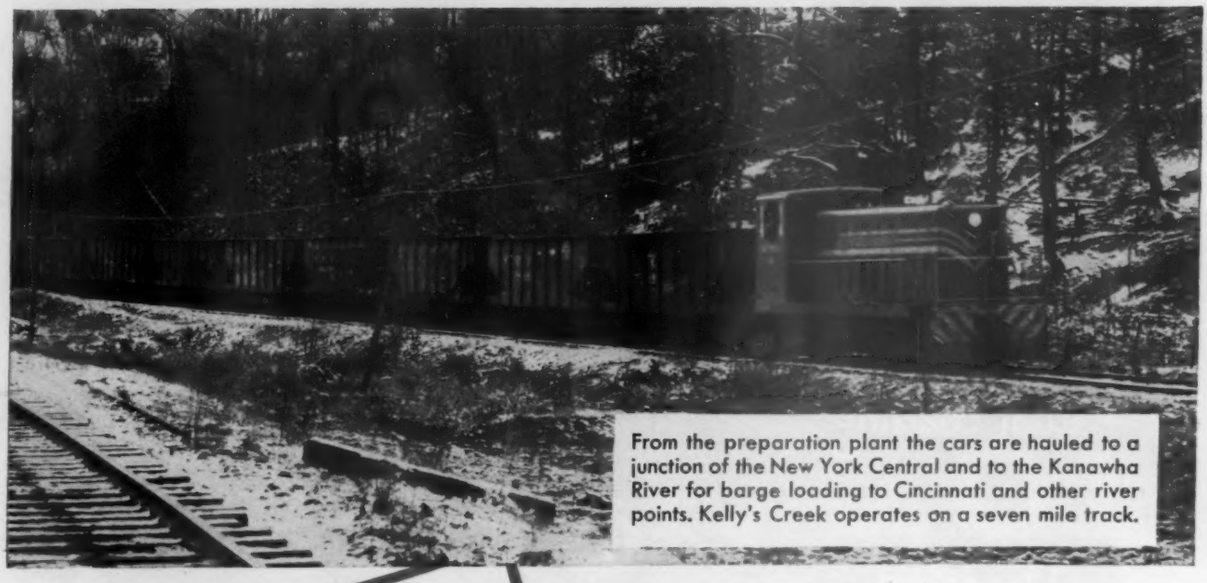
With costs skyrocketing and high production urgent, Kelly's Creek Railroad is delighted with the high availability and low cost of operation of its two G-E 70-ton 600-hp diesel-electric locomotives.

W. H. Warner and Co., Inc. of Cleveland, Ohio operates this Railroad in conjunction with its coal mines at Mammoth, W. Va.

For over a year and a half these diesel-electrics have been available 95% of the time. Simplified maintenance and servicing requirements have made this possible. Progressive repairs have eliminated long shopping periods for classified repairs.



Diesel-electric hauls 20 loaded hoppers from one of three tipples to the central preparation plant.



From the preparation plant the cars are hauled to a junction of the New York Central and to the Kanawha River for barge loading to Cincinnati and other river points. Kelly's Creek operates on a seven mile track.

Other important advantages to Kelly's Creek from these locomotives are:

- **Reduced shop outlay**
- **Less wear on roadbeds and rails**
- **70% decrease in parts inventory due to the G-E unit exchange plan. This plan—turning in of worn or inoperative units for already rebuilt units—saves time and stock space.**

This is just another example of the efficiency of operation of the G-E 70-ton diesel-electric. Whether it's for switching, road haul, or transfer service, there's a place for this locomotive on your railroad.

For further information on the G-E 70- and 44-ton diesel-electric locomotives contact your nearest G-E sales office. Or send for bulletin GEA-4657A, General Electric Company, Schenectady 5, N. Y.

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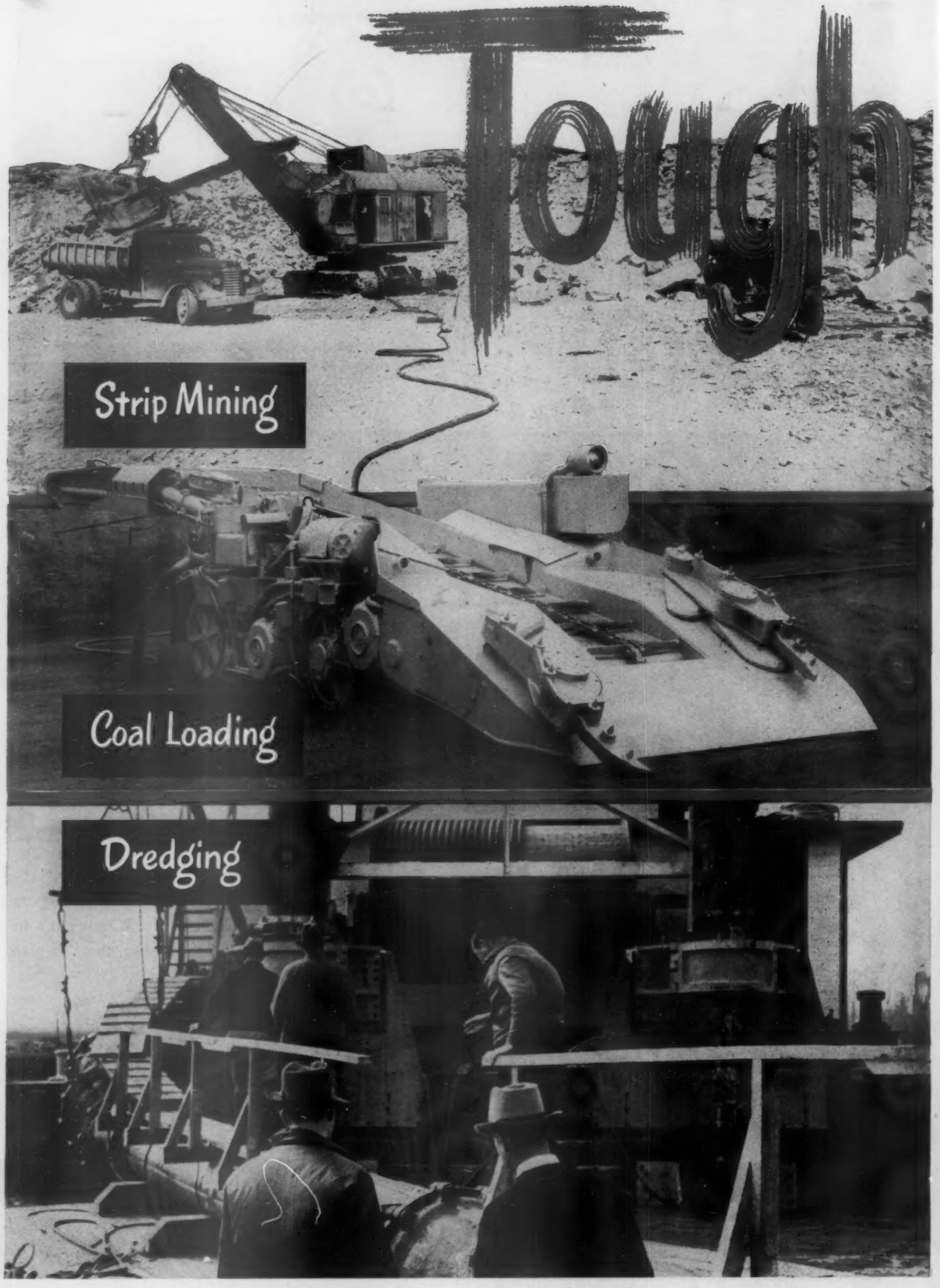
GENERAL ELECTRIC


Tough
Strip Mining
Coal Loading
Dredging

jobs all...

but they're easy for

AMERCLAD*

the heavy-duty electrical cable and cord

You'll find U·S·S Amerclad down in the mines, where it's relentlessly coiled and uncoiled and dragged over rails and ties. You'll find it on railroads for general utility use under all types of conditions.

You'll find Amerclad delivering power to the shovels in quarries and strip mines. There, it's reeled in and out all day long and hauled over sharp rock.

You'll find Amerclad under water, too . . . it's used on dredges that need electrical cable that can withstand great abuse. Actually, there's an Amerclad Cable or Cord for just about any tough operating condition you can name.

Amerclad Cable and Cord is jacketed with tough, resilient Amerprene. This quality jacket resists moisture, sunlight, mineral oil, grease, flame. It will not propagate fire. And it meets the requirements of ASTM D752.

Amerclad Cable and Cord can be furnished with PS Shielding,† the conducting rubber tape that prevents corona discharge because it will not pull away from the insulation like metallic shielding.

For more information, get in touch with your nearest American Steel & Wire Company office.

†*PS Shielding—an original development of American Steel & Wire Company.*

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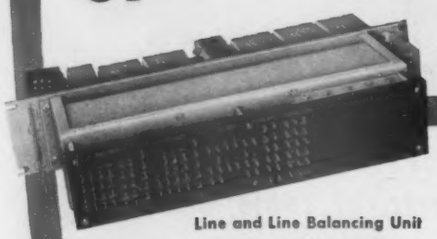
GAIN in many ways with

Automatic Electric

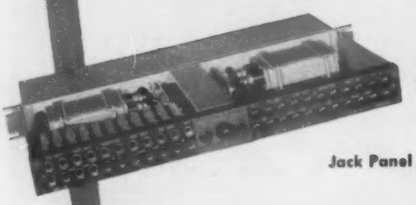
type 47 Voice Frequency Repeater

with electronic amplification

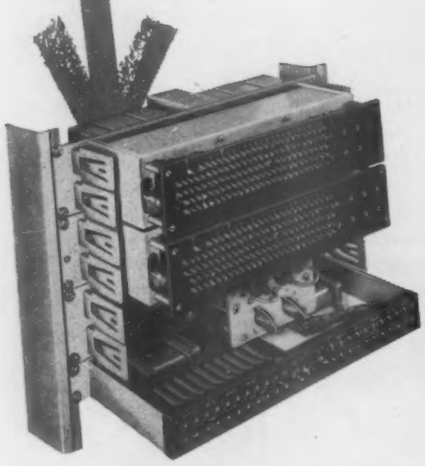


Line and Line Balancing Unit

Amplifier Unit



Jack Panel



Intermediate 2-wire repeater with power supply. Other units available for terminal operation, or for 4-wire applications.

Pep up your voice circuits with the Type 47 Voice Frequency Repeater. One or more repeaters will provide the "gain" you need for proper transmission volume on long lines. The Type 47 Repeater offers other "gains", too—*standardized components* that permit "tailoring" an assembly to your specific needs—*double-duty* units that reduce costs and save space in multiple installations. For example:

The line and line-balancing unit, with its choice of 4 repeating coils and 3 cutoff filters, permits a line impedance match with less than 0.1 db. loss, and therefore, the greatest useable gain from the amplifier unit.

The amplifier unit is common to all 2- and 4-wire terminal and intermediate repeaters. It has a 600-ohm input and output impedance. In the event of power failure, an automatic by-pass circuit permits continued voice transmission at a reduced level.

The jack panel, fully equipped, serves two repeaters, thus saving space and cost. The 115 v., 50-60 cycle, a-c power unit, if desired, also serves two repeaters; it mounts behind jack panel, saving still more space.

Write for Circular 1692-A for complete Type 47 Voice Frequency Repeater description.

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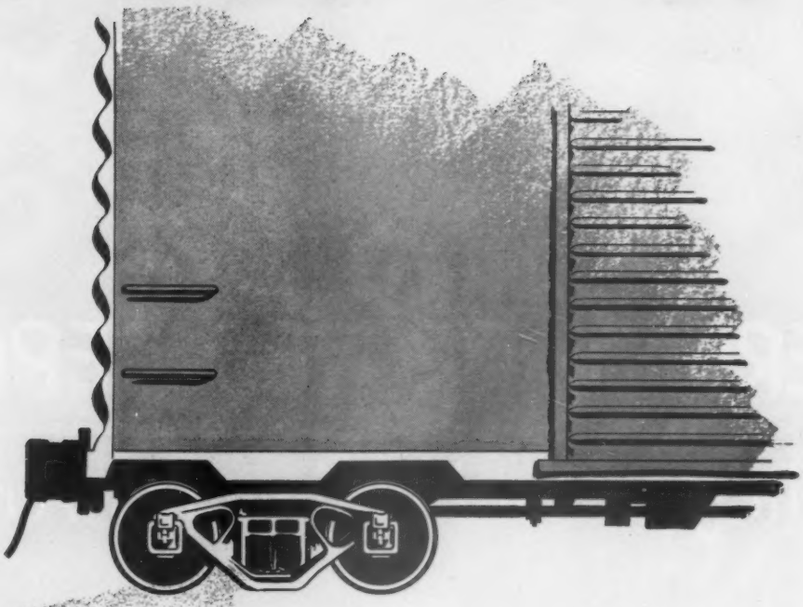


Start here...

to get more pay from your pay-load

Long travel springs made by the Railway Steel-Spring Division cushion the pay-load in your freight car and insure a smooth, even ride. This saves you money as it helps reduce costly damage claims to a minimum.

Long travel springs also allow higher speeds that mean faster service and more profits for you from increased freight traffic. Other advantages include lower maintenance costs and longer life for your rolling stock and roadbed.

These features together with Alco's years of experience in spring design and engineering are your assurance of top performance and efficient service.

Always specify *"Railway" springs.* Call your Alco sales representative in New York, Cleveland, Chicago, St. Louis, St. Paul, San Francisco for more information.

Railway Steel-Spring Division

AMERICAN LOCOMOTIVE COMPANY


Get
SERVICE-PROVED DEPENDABILITY
in your Car Lighting and Air-Conditioning

Exide-Ironclad BATTERIES

help provide passenger comfort on America's famous "name trains"

You can always count on Exide-Ironclad Batteries for safe, sure, economical service. Their high capacity and rugged construction are equal to all storage battery needs . . . in normal passenger car service . . . in emergencies. Exide-Ironclad Batteries give you:

AMPLE POWER for entire car-lighting and air-conditioning loads . . . uniform voltage at proper values throughout run.

STEADY LIGHTS and **COOL CARS**—high sustained voltage that keeps lights strong and compressors running steadily even during long stops.

UNINTERRUPTED SERVICE—trouble-free performance—withstand vibration, shock, service variations and temperature differences.

LOW RATES OF DEPRECIATION—exceptionally long life.

EASE OF SERVICING.

LOW COSTS of maintenance and repair.

ABILITY TO MEET ALL REQUIREMENTS of car design and electrical loads. They can be easily changed or recharged in yard . . . are safe, clean, quiet.

For *assured dependability* and *uniform service*, equip *all* your passenger cars with Exide-Ironclad Batteries.

Exide-Ironclad Batteries are the Best Power Buy . . . AT ANY PRICE

DEPENDABLE POWER

"Exide-Ironclad"
Reg. Trade-mark U. S. Pat. Off.

THE ELECTRIC STORAGE BATTERY COMPANY
Philadelphia 2

Exide Batteries of Canada, Limited, Toronto

1888
DEPENDABLE BATTERIES FOR 63 YEARS
1951

Save $6.60 Per Mile Yearly on Crossties NOW

Here's a tested and proved way to cut soaring crosstie costs

CROSSTIE prices have skyrocketed. Today each new tie placed in track represents a five dollar bill. Three thousand of them mean $15,000 a mile for crossties alone. Higher costs of timber, preservation, distribution and labor compel you to find some way to get better, longer-lasting ties.

After ten years of intensive research, a new process that adds years to the service life of crossties has been found. Ordinarily, ties cannot be treated efficiently when green. Heretofore, air-seasoning has always been a necessary part of tie procurement, and this takes up to twelve months or longer for red oak, depending on the climate and other factors.

Interest and insurance charges during this period come to about ten cents per tie; further expense is incurred by checking, splitting and decay.

Vapor-Drying* is the new scientific process that eliminates the long air-seasoning period. It also adds years to tie service life.

Consider a railroad operating 4,500 miles of track with an assumed service life of 25 years for crossties. On this basis, it will replace about 550,000 crossties every year. Switch and bridge ties bring the total to an equivalent of about 600,000 crossties.

Air-seasoning therefore would require that this road maintain a perpetual inventory of not less than the equivalent of 600,000 ties to insure a constant supply. Vapor-Drying, of course, would not entirely eliminate this inventory, but operations indicate that it could be cut at least in half. Assuming that green ties this year cost $2.00 each on the average, reducing the tie stockpile to 300,000 pieces means an investment saving of $600,000. Representative interest and insurance charges, conservatively estimated at five per cent, come to an actual annual saving of $30,000, which in turn means an immediate yearly saving of $6.60 for each mile of track.

But that's not all you save. Careful tests and observation of Vapor-Dried ties in track for more than seven years, and treatment of over half a million crossties by the new process, indicate an increased life expectancy of not less than three years. That's the opinion of competent railway engineers and specialists in wood preservation. Why the longer life? Because Vapor-Drying produces deeper penetration and better distribution of preservatives and virtually eliminates progressive checking and splitting in track. The latter fault is characteristic of oak and hardwood ties air-seasoned and treated by conventional methods. In the opinion of many railroad engineers, it is one of the big reasons for early failure.

Nationally, the average life of ties is about 25 years. On the basis of 3,000 crossties per mile of main track, this means a renewal of 120 ties per mile per year. It is no exaggeration to say that each treated tie is worth $4.75 installed today. Now, if the tie's life be extended five years more to 30 years in main track, the renewal rate would be only 100 ties per mile per year, a saving of of $95.00 per mile. Add to this the immediate saving of $6.60 a mile by eliminating air seasoning, and maintenance costs are reduced over $100.00 per mile per year.

Other economic aspects of Vapor-Drying will be presented in future issues of this series. But why wait, when the whole story, with supporting evidence, is available now? Let us show you what Vapor-Drying can do for your road; how this self-liquidating investment will save you money and speed up delivery of crossties. Vapor-Drying Division, Taylor-Colquitt Co., Spartanburg, S. C.

TAYLOR-COLQUITT CO. T·C TIMBER CONSERVATION ®

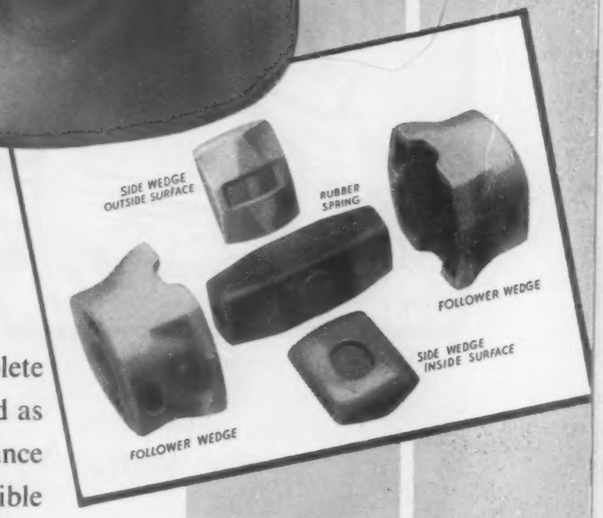
*Process patented.

(Advertisement)

ONLY 5 SIMPLE RUGGED PARTS~

in this Smoothest

of All Snubbers!



Yes, and each of these parts is plainly visible for quick, complete inspection. It's the snubber with the *rubber spring*, test-proved as tops for effective performance, long service, and low-maintenance dependability. Treat your old cars to the finest ride it is possible to get from an A.A.R. Coil-Snubber Grouping. Install Simplex and see what a difference it makes in smoothness and operating economy.

SIMPLEX *unit-type* SNUBBERS

AMERICAN STEEL FOUNDRIES

MINT MARK OF FINE PRODUCTS

Old Pals —By Hungerford

We will be glad to send you enlarged copies of this Hungerford cartoon (without advertising copy) for posting on your office and shop bulletin boards, or a cut for your company magazine, at cost.

Watch for other railroad cartoons by Mr. Hungerford

BROWNHOIST

builds better diesel electric locomotive-cranes . . .
only BROWNHOIST gives you all these features

NEW HOIST CLUTCHES. Roller-bearing mounted wide-faced drums. Air-operated cylinder, mounted within the drum itself . . . provides high line pull and easy adjustment.

ELECTRIC ROTATION together with electric travel reduces maintenance to a minimum.

NEW FRICTION CLUTCH BOOM HOIST. Safe! Driven by worm and wheel enclosed in oil bath. Twin-barrelled, extra large diameter boom-hoist drums in full view of operator. Drums take all line in one layer which eliminates overlapping and fraying of rope.

DYNAMATIC CLUTCH between engine and crane machinery now standard equipment. Gives smooth, sensitive, 32 step control. Banishes slippage. Eliminates torsional impulse and vibration.

NEWLY DESIGNED, EXTRA HEAVY STREAMLINED CAB with controls functionally located for operating efficiency. All machinery guarded against weather, yet readily accessible.

NEW CLEAR-VISION BOOM provides maximum vision for greater working efficiency. This open type boom in conjunction with the Brownhoist patented Monitor-type cab guarantees 360° visibility.

BROWNHOIST

and these optional features—8 wheel chain drive for increased drawbar pull. Twin engine drive for work on extreme grades or where greater tractive effort is required. Timken roller bearing journals for low starting tractive effort. For complete description write to . . .

143

INDUSTRIAL BROWNHOIST CORPORATION, BAY CITY, MICHIGAN • **DISTRICT OFFICES:** New York, Philadelphia, Pittsburgh, Cleveland, San Francisco, Chicago, Canadian Brownhoist Ltd., Montreal, Quebec. **AGENCIES:** Detroit, Birmingham, Houston, Los Angeles.

over 50 years' experience!

The many important improvements in Westinghouse Friction Draft Gears have been made as a result of the Research, Laboratory and Service Tests which have been carried on for more than 50 years!

The result—longer life and lower maintenance cost for cars—*and for Draft Gears too.*

WESTINGHOUSE
Friction Draft Gear
Certified A. A. R.

CARDWELL
Friction Bolster Spring
for A. A. R. and long travel springs

5128

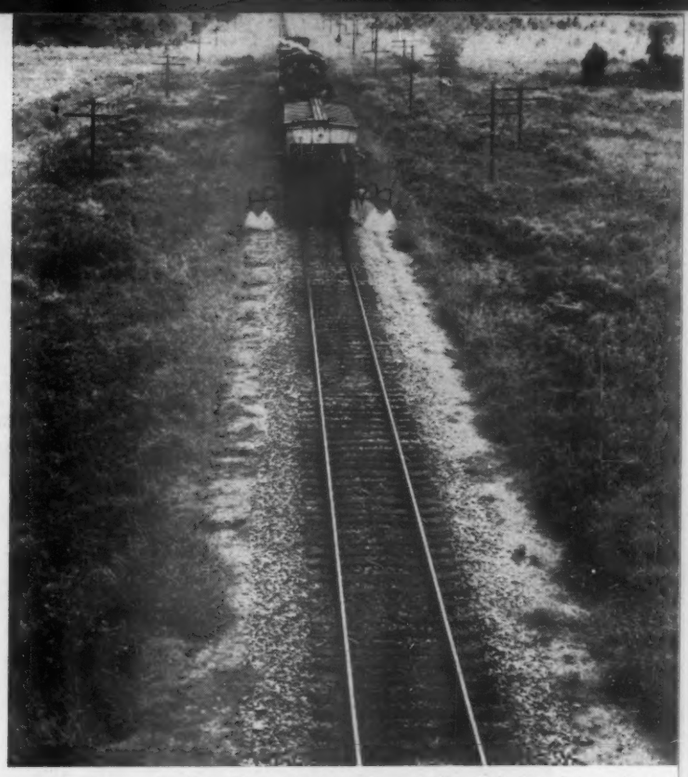
1951

Over 98% of the Cars in Freight Carrying Service are A. A. R. Construction, and Over 96% have Friction Draft Gears.

Cardwell Westinghouse Co., Chicago
Canadian Cardwell Co., Ltd., Montreal

LONG-RANGE WEED CONTROL PROGRAM GIVES CLEAN TRACK AT DIMINISHING ANNUAL COSTS

General Chemical offers tailor-made program for maintaining weed-free ballast . . . enables road to achieve clean track immediately with continuous reduction in regrowth.



Spray train operating in southwest territory. General Chemical's Weed Control Service provides modern spray trains and highly trained technicians.

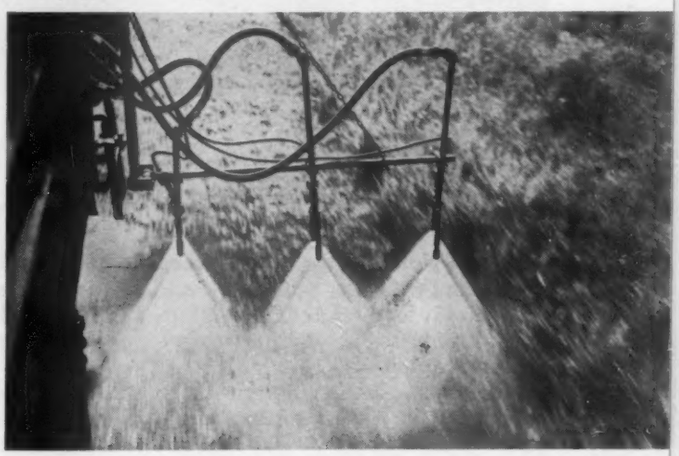
Out of its extensive background in handling individual railroad weed problems, General Chemical has developed a modern method of control which now enables a road to achieve clean track immediately . . . with a continuous reduction in root growth, coupled with diminishing costs.

Such results are obtained by a two- or three-year program following an application schedule *especially tailored to overcome each road's particular weed problems.*

Aimed at control of perennial root systems, General's scientific method assures killing off of long established perennials; continually reducing amount of regrowth year after year; eliminating heavy seed germination; and preventing outside encroachment in subgrade. With this thorough method, track can be maintained in a relatively weed-free condition with minimum dosages!

While initial costs may be somewhat greater than for temporary annual relief, such a high level of continuing control is achieved that the over-all long-range costs are far less and lead to increased savings. The end result is track which can be kept weed-free year after year with the smallest possible budget.

Duplex spray system gives complete control for all conditions. Two sets of remote-controlled spray heads permit instant application of correct dosages for any type of weed growth and track conditions encountered.



Main line track in central Illinois shows typical results. Sub-grade and berm received a single treatment for two successive years. Now cleared of root systems of Goldenrod, Perennial Sunflower, Bracken, Dogbane, other weeds.

Important Information Available—

To help railroad managements in planning their weed control programs, General Chemical has just published a descriptive portfolio "A Policy Decision in Railroad Weed Control". Outlining General's method of treatment, it contains full color illustrations of results achieved in northern and southern areas. Copies may be obtained by writing on business letterhead to Weed Killer Department, General Chemical Division, Allied Chemical & Dye Corporation, 40 Rector Street, New York 6, N. Y.

Why the sea is salty

IN Norse mythology, a poor man got a magic mill from the elves. With it he could grind whatever he wanted--food, clothing, furniture, and best of all, gold. Of course, the poor peasant's lot changed from poverty to riches.

An envious brother borrowed the mill. He commanded it to "grind herrings and broth and grind them good and fast." But having taken the mill in such haste, he didn't know the magic words to shut it off. He was almost drowned in broth when the brother came to the rescue.

Finally, the magic mill was stolen by a salt dealer, who put it on his ship. Safely at sea, the skipper demanded, "Grind salt and grind it good and fast." Alas, he hadn't learned the control words either. The mill ground salt endlessly, filling all his kegs and his hold, covering the decks and at last sinking the ship. There at the bottom of the sea, so people say, the magic mill still grinds--and that's why the sea is salty.

From time immemorial, men have dreamed about magic mills and schemes to bring abundance and riches. Here in America, today, there are plans that are flooding us with superabundance of certain commodities. But what about the magic words to shut off the mill?

Isn't it time we see the truth in this ancient Norse myth, that "too much" is just as foolish as "too little?" We may well remember this first law of economics: In a *free* market, supply can adjust itself to demand--whether it be potatoes or steel--without sinking the ship. Here is a must job for all thinking Americans.

QUALITY YOUNGSTOWN SERVICE

The Youngstown Sheet and Tube Company

General Offices--Youngstown 1, Ohio
Export Offices--500 Fifth Avenue, New York

MANUFACTURERS OF CARBON ALLOY AND YOLOY STEELS

RAILROAD TRACK SPIKES - CONDUIT - HOT AND COLD FINISHED CARBON AND ALLOY BARS - PIPE AND TUBULAR PRODUCTS - WIRE - ELECTROLYTIC TIN PLATE - COKE TIN PLATE - RODS - SHEETS - PLATES.

LITTLE THINGS HAVE A WAY OF ADDING UP!

With traffic increasing sharply, there's extra work ahead for your Diesel locomotives—extra need to guard them against breakdowns. Sometimes these breakdowns are caused by little things—rings sticking, valves hanging up, perhaps a scored bearing—but these *little* things can add up to costly downtime!

Socony-Vacuum *Correct Lubrication* helps prevent such troubles. For years we have worked closely with operators and builders, conducting extensive laboratory tests and *field* evaluations in cooperation with them.

As a result, our Diesel lubricating oils are continually being improved—are increasing Diesel availability, extending periods between overhauls and cutting maintenance costs on many leading roads right now! Equally important, they are designed to be compatible with other oils.

Why not use our research facilities, experience and products to keep *your* Diesels rolling?

SOCONY-VACUUM

DAROCYLE Railroad Lubricants

SOCONY-VACUUM

Correct Lubrication

WORLD'S GREATEST LUBRICATION KNOWLEDGE AND ENGINEERING SERVICE

SOCONY-VACUUM OIL COMPANY, INC., RAILROAD DIVISION, 26 Broadway, New York 4, N. Y.

Goodall's Super Redo*

on Burlington's new *gallery* cars

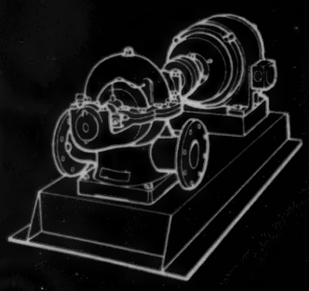
The new tile color used in these new commuter coaches by the Budd Company is refreshing and most complimentary.

Where durability and luxury are the keynote – Goodall Fabrics are preferred

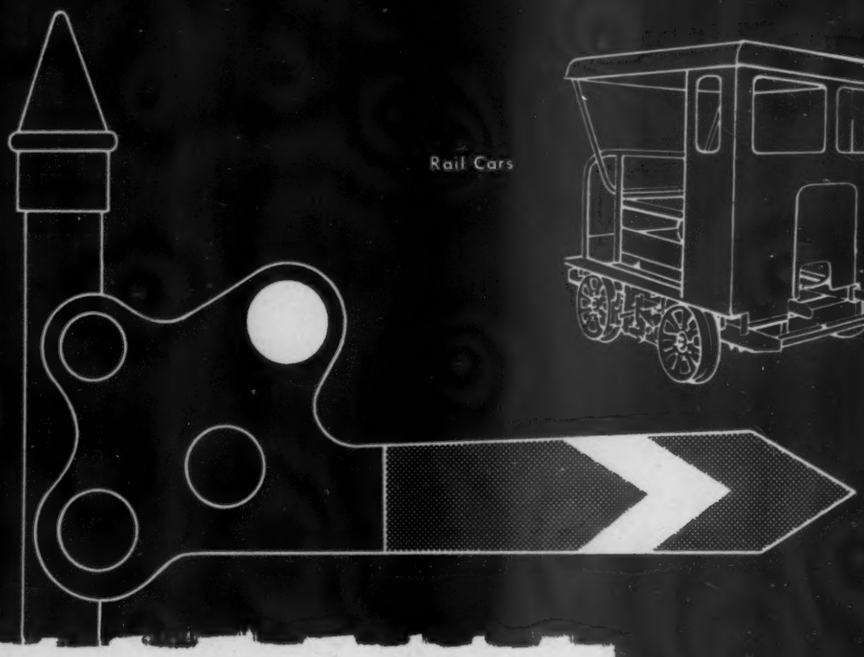
GOODALL, first in transportation fabrics, developed this heavy-duty vinyl plastic to give maximum economy by withstanding the punishment of constant passenger loads. *Blended-for-Performance* with Goodall skill, Super Redo resists stains, perspiration, soil, grease, water. That, plus easy-cleaning, cuts maintenance costs. Sunshine-Tested colors remain rich and fresh-looking throughout its long life. While Super Redo is made for serviceability at minimum cost, Goodall hasn't overlooked beauty.

Goodall Fabrics INC.
Subsidiary of Goodall-Sanford, Inc.
THE FINEST NAME IN FABRICS

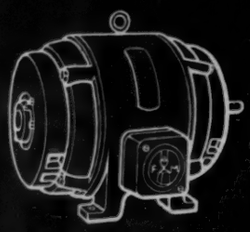
GOODALL FABRICS, INC. • NEW YORK • BOSTON • CHICAGO • DETROIT • SAN FRANCISCO • LOS ANGELES



Centrifugal Pumps



Rail Cars



Electric Motors
and Generators

FOR RAILROAD EQUIPMENT

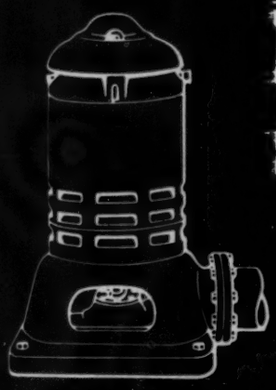
IT'S

FAIRBANKS-MORSE,

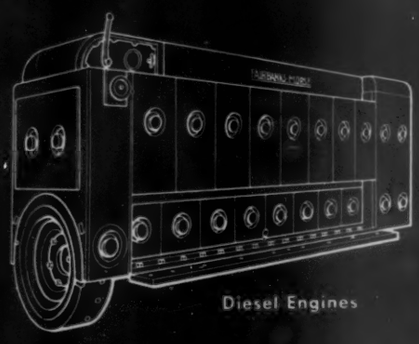
a name worth remembering

DIESEL LOCOMOTIVES AND ENGINES • ELECTRICAL MACHINERY • PUMPS
SCALES • HOME WATER SERVICE EQUIPMENT • RAIL CARS • FARM MACHINERY

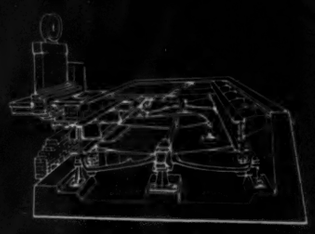
Water, Coal and
Sanding Stations



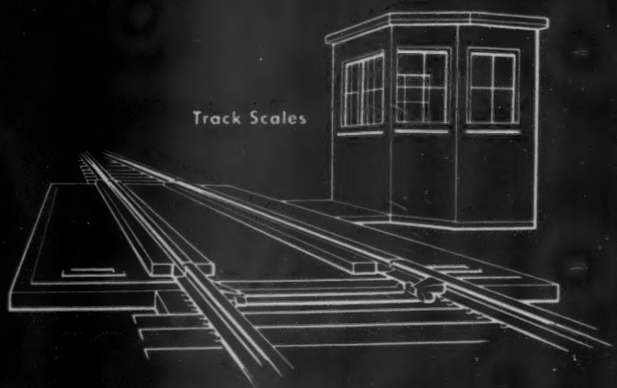
Turbine Pumps



Diesel Engines



Truck Scales



Track Scales

KOPPERS CREOSOTED TIMBER PANEL GRADE CROSSINGS

● Koppers Creosoted Grade Crossings are made to last. They are sturdily built and decay-resistant, do not sag, spall, "washboard," or disintegrate under heavy wheel load. When the track is worked, they can be removed and replaced, using all the original material.

The panel method of construction offers easy installation. Completely assembled individual panels can be handled and placed by workmen. The assembly is securely fastened to withstand vibration, swelling or shrinking of the wood.

Write for a copy of the new folder on KOPPERS GRADE CROSSINGS. It contains construction details, technical data, and the reasons why Koppers Grade Crossings will save you money.

KOPPERS **PRESSURE-TREATED WOOD**

KOPPERS COMPANY, INC. • Pittsburgh 19, Pa.

I'm a 50-cent dollar but, when I'm used right, I can give you a 150-cent value.

Take AMCCW chilled car wheels. My predecessor, the 100-cent dollar, used to make out pretty well with these wheels. In 1929, for instance, the AMCCW wheel averaged about 40-million car miles without failure.

But the AMCCW wheels in service during the last five years of the 1940's, after I'd been devalued, gave you 111-million car miles average per wheel failure, according to ICC reports. The figure for 1950 was close to 120-million. See what I mean about that 150-cent value?

The 50-cent dollar has a point there, thanks to the continuous improvement of the AMCCW wheel. Better foundry methods, stricter inspection, association research—all have helped to step up chilled wheel safety and performance, while loads and speeds were being increased.

Increase in Safety Performance for AMCCW wheels
(car miles without failure)

1950	120,000,000
1929	40,000,000
	80,000,000

or 200% increase

Now the heavier rim of the redesigned AMCCW wheel doubles rim strength, further increases flange strength. Thicker, heavier brackets (and more of them) give added flange support. (The new wheel is illustrated above.)

So here's the story in a nut-shell:

Although the dollar has been devalued more than 50 per cent, the safety performance of the AMCCW *wheel has increased 200 per cent!*

For more complete information about the advantages of AMCCW chilled car wheels, send for the booklet, "GENTLEMEN OF THE JURY."

Low first cost
Low exchange rates
Reduced inventory
Short haul delivery
Increased ton mileage
High safety standards
Complete AMCCW inspection
Easier shop handling

ASSOCIATION OF MANUFACTURERS OF CHILLED CAR WHEELS

445 North Sacramento Boulevard, Chicago 12, Ill.

American Car & Foundry Co. • Southern Wheel (American Brake Shoe Co.)
Griffin Wheel Co. • Marshall Car Wheel & Foundry Co. • New York Car Wheel Co.
Pullman-Standard Car Mfg. Co.

LOST:

110,000,000 Man Hours Annually due to Industrial Eye Accidents

YOU CAN PREVENT THIS TRAGIC WASTE IN YOUR PLANT WITH GOGGLES COSTING $2.30

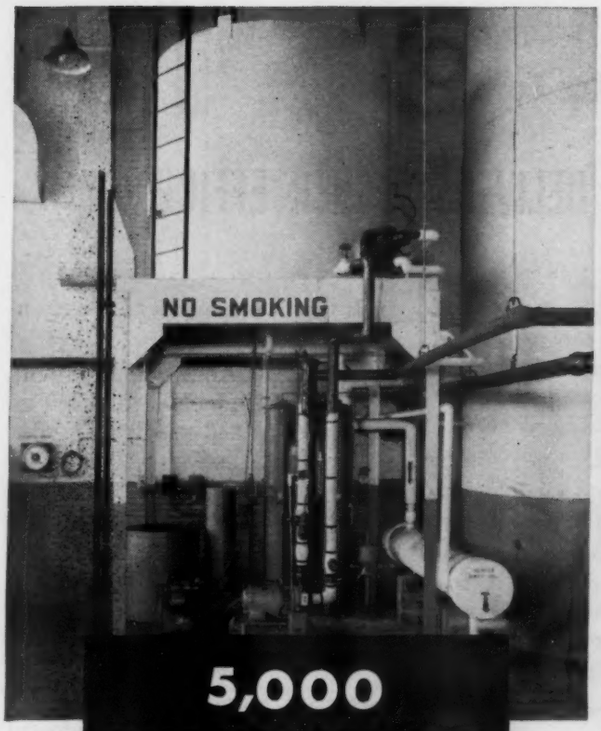
Eye accidents cost industry per year about 110,000,000 man hours or about $160,000,000 apart from compensation, medical, idle machine charges and other costs. Yet the safety goggles that *prevent* 98% of eye accidents average $2.30 in cost or only 78 cents more than the loss of just *one man hour* of productive time. (Current average hourly earnings of factory workers $1.52.)

In these days of capacity production and short supply of skilled workers, an AO Eye Protection Program deserves your serious consideration — *more than ever.* Particularly when it can pay for itself within six months time in the production it protects and the costs it can save. Ask your nearest AO Safety Representative to show you how.

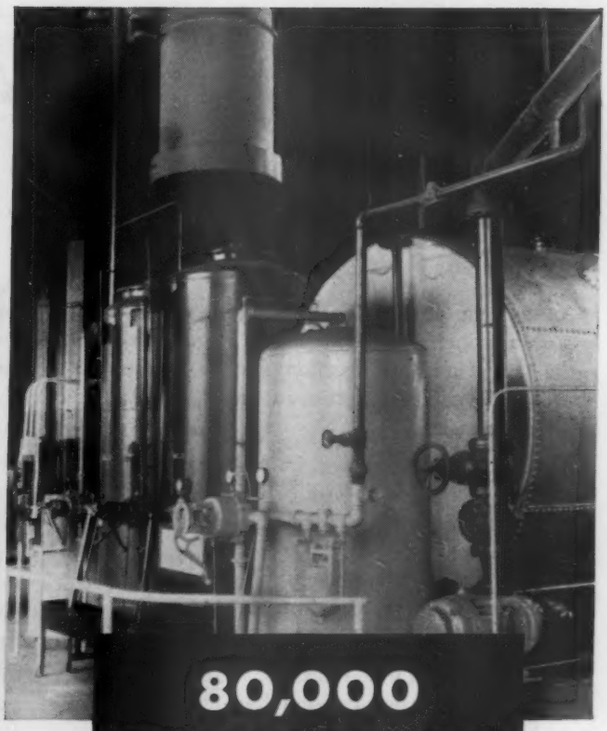
FACTS TO REMEMBER: Industrial eye injuries cost over $5 per employed worker per year — with compensation averaging $328 per injured man even in the low-cost year of 1938.

American Optical Company
SAFETY PRODUCTS DIVISION

SOUTHBRIDGE, MASSACHUSETTS • BRANCHES IN PRINCIPAL CITIES



5,000 GALLONS PER DAY



80,000 GALLONS PER DAY

A DEARBORN DE-IONIZING SYSTEM...

TO PROVIDE THE AMOUNT OF MINERAL-FREE WATER YOU NEED

A Dearborn De-Ionizing system will provide the mineral-free water you need at less than 10 percent the cost of distilled water.

This mineral-free water, when conditioned with Dearborn formula 517, will provide proper Diesel cooling . . . eliminate mechanical failure of liners, heads and blocks caused by corrosion, scale and sludge deposits. This combination will protect cooling systems of engine-driven auxiliary generators and radiators of trucks, buses, scrapers, graders, caterpillars. Dearborn De-Ionizing systems will also produce mineral-free water for storage batteries and adequate supplies of scale-free, non-corrosive water for Diesel steam generators.

A Dearborn engineer will discuss a De-Ionizing system to meet the requirements of your operation. The only information required is: (1) Analysis (or sample) of raw water; (2) quantity and quality of mineral-free water required; (3) available space for equipment; (4) raw water pressure and size of supply line; (5) available power characteristics.

HAVE YOU REQUISITIONED YOUR DEARBORN CHROMOKIT?

It provides a fast, simple, accurate and economical way to determine the chromate content of your Diesel cooling water. Only $7.50 each.

INFORMATION ON DE-IONIZING SYSTEMS

A copy of "Dearborn De-Ionizing Systems," containing valuable information about how to secure the mineral-free water you need, will be sent upon request.

DEARBORN CHEMICAL COMPANY
310 S. Michigan Ave. • Chicago 4, Ill.

Dearborn
TRADE MARK REGISTERED
THE LEADER IN WATER TREATMENT AND RUST PREVENTIVES

Dearborn Chemical Company
Dept. RA, 310 S. Michigan Ave.,
Chicago 4, Ill.

( ) Please send booklet "Dearborn De-Ionizing Systems"
( ) Have a Dearborn Engineer call.

Name.....
Railroad.....
Address.....
City.....*Zone*....*State*.....

An informative message from Chrysler Corporation

NEW DESIGN FREIGHT CAR TRUCK DELIVERS HIGHER EFFICIENCY

CHRYSLER engineering research has always included vehicle "ride" —the design and construction that give superior riding qualities in the vehicles we make.

Revolutionary advances in cars and trucks have come out of this fundamental research. And our engineers became interested in applying these important principles of vehicle ride to serve American railroads and shippers.

In collaboration with railroads, we developed an advanced design Railroad Freight Car Truck which affords greater protection to goods in transit, even in capacity loading.

It is built with balanced suspension which absorbs both lateral and vertical track-originated shocks. It is efficient to operate and easy to maintain. Its durability, dependability and reduced wear have been demonstrated in several years and many miles of railroad freight and head-end service.

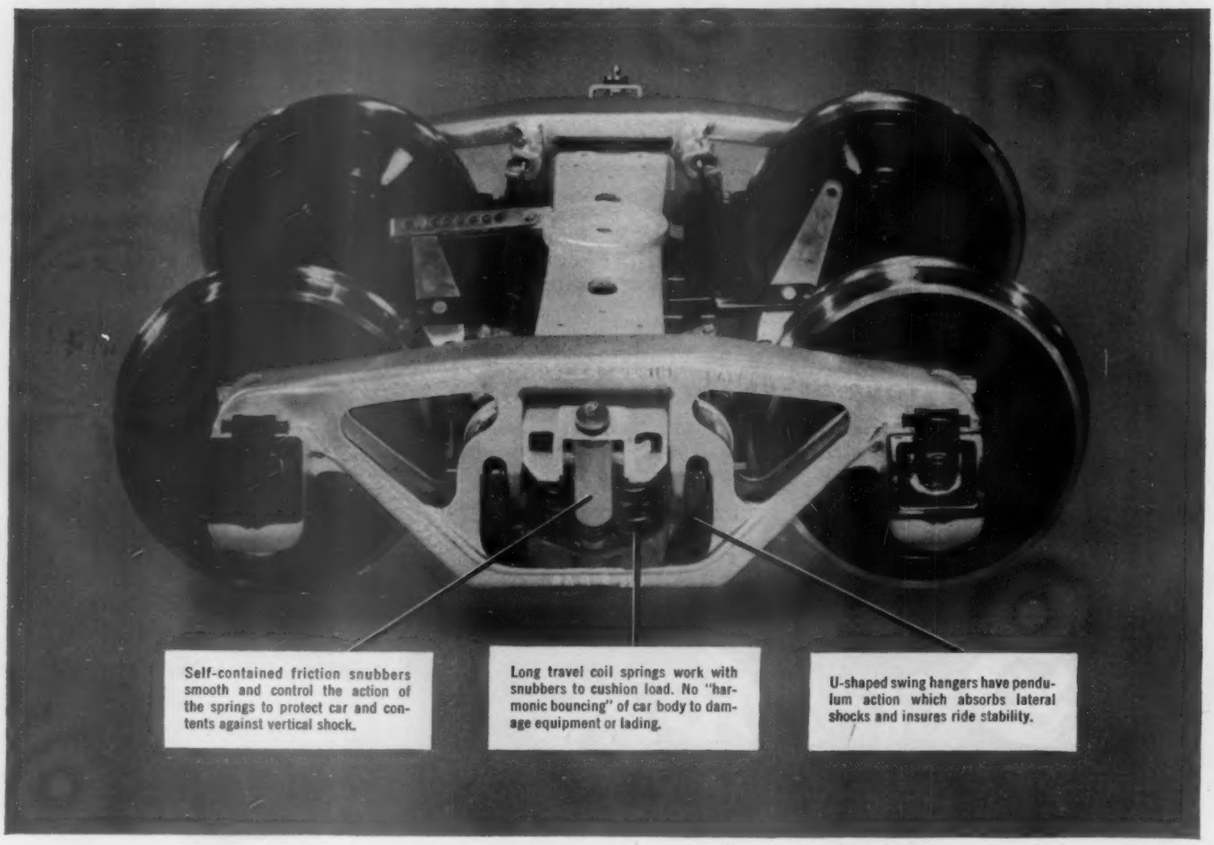
All segments of the transportation industry are vital to our nation's mobility. The development of this railroad truck stems from a basic automotive engineering advance, translated to the field of railroad transportation.

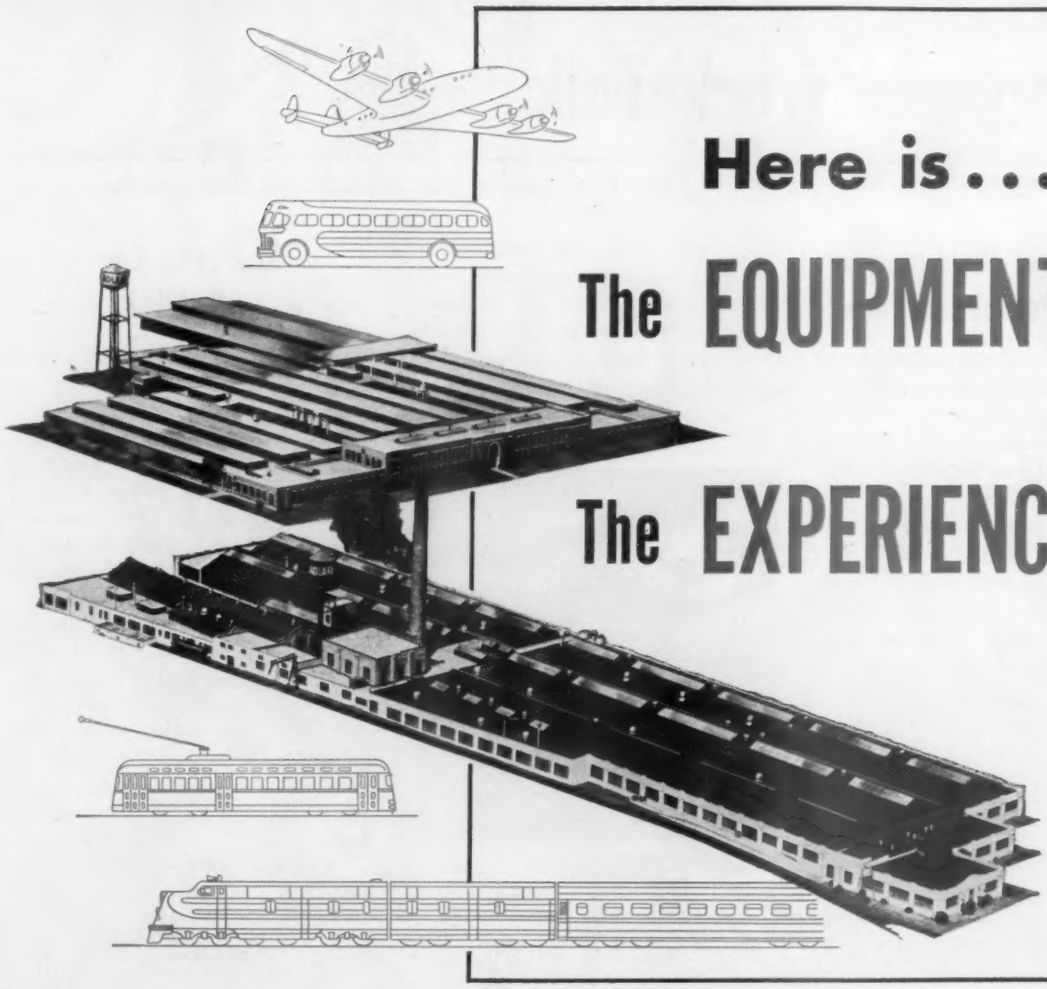
Chrysler Corporation felt that the best interests of the railroads would be served by extending to established manufacturers of railroad equipment the opportunity to produce this advanced unit. It is through such channels that it is available to American railroads.

Symington-Gould Corporation, Depew, N. Y., has been licensed to manufacture and sell the Chrysler Design Railroad Freight Truck. The self-contained friction snubbers—an important feature of the truck—are of Chrysler design and are manufactured and sold by the Houde Engineering Division, Houdaille-Hershey Corporation, Buffalo, N. Y.

The new trucks are already in use by many railroads on their freight cars, and they have been adopted for the General American-Evans Damage Free Box Car.

CHRYSLER CORPORATION





Here is . . .

The EQUIPMENT

The EXPERIENCE

Over 10 acres of buildings . . . with complete and up-to-date equipment to produce ADLAKE Aluminum Sash, Curtains, Hardware and Specialties for the transportation industry . . .

An experienced staff of engineers, draftsmen and manufacturing personnel, thoroughly familiar with the requirements of their field . . .

Ninety-four years of experience in producing ADLAKE transportation equipment . . .

THESE QUALIFICATIONS assure you that every product which leaves the Adams & Westlake plant lives up to the ADLAKE name . . . a name which has stood for the highest quality in transportation equipment for almost a century.

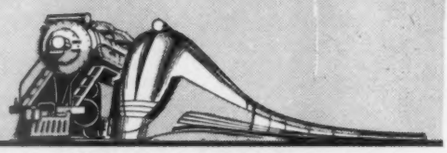
THE Adams & Westlake COMPANY

Manufacturers of ADLAKE Specialties and Equipment for the Transportation Industry

Adlake TRADE MARK

Established 1857 • ELKHART, INDIANA • New York • Chicago

"Shop and Track Talk"



Published by OXWELD RAILROAD SERVICE COMPANY, a Division of Union Carbide and Carbon Corporation

Portable Spot-Welding Unit Reduces Production Time

When a railroad car manufacturer began positioning angle-bar stiffeners by spot-welding, he cut the time required to do one car side from 6 hours to less than 1⅛ hours. By reducing this positioning time, the manufacturer speeded up the production line, and reduced his cost. He also made a man available for other work—one man now does the work two men did previously.

Positioning time was reduced with the portable unit shown in Fig. 1. A transformer with a built-in high frequency unit, complete with a HELIARC Spot-Welding gun, argon cylinder, and water tank with a circulating pump were mounted on a rubber tired truck. The completely portable unit requires only an electrical outlet for power supply.

To spot-weld the stiffeners to a car side, the operator positions the spot-welding gun, and simply pulls the trigger. Water, argon, and current flows are all timed automatically so that no special skill is required to make clean, strong welds. Fig. 2 shows how easily the spot welds are made.

This application of inert gas-shielded arc welding can be used for many other applications. Ducts, tubes, containers, and other light structures of mild steel, low alloys, or stainless steel, 0.030 to 0.064 in. thick can be joined in one or two seconds per weld. Ask OXWELD for additional information on spot-welding with a HELIARC torch.

Fig. 1 — Portable spot-welding unit which can be moved from job to job by one man.

Fig. 2 — Spot-welding the car stiffeners in position.

How Long Can RIBBONRAIL Be?

As long as you want it! Today there are enough strings of long welded rail in main-line open track in all kinds of climatic conditions to prove that continuous rail presents no expansion or contraction problem. In fact, the total movement at the ends of a continuous rail one mile long is about the same as the movement of a 39-ft. rail with conventional fastenings.

Obviously, the long rails are restrained against movement. Actual restraint is afforded by the joint fastenings at the ends of the long stretches of rail; by the frictional resistance of the tie plates and the rail fastenings; and by the application of anti-creepers for a sufficient distance from the ends of the rail.

Write OXWELD for more information.

What's News?

► Rail-end welding gangs of several railroads are now eliminating driver burns at the same time they build up rail ends. By using OXWELD MW rod, original surface of the rail is restored.

► Over 115,000 welds in rail have now been made in OXWELD pressure-welding machines. Although these welds have been made over a period of 12 years, over half of them have been made in the last three years alone.

► Strong aluminum beds and bases for roomette cars are now made by means of HELIARC welding. The clean, strong welds are made quickly since no flux is required.

► An ingenious four blowpipe, machine-cutting setup uses twin nozzles to produce ready-to-weld edges on each side of new formed car stakes, or for trimming off the rivet holes on old stakes. The double-edge cuts mean less work and faster production of finished parts.

OXWELD RAILROAD SERVICE COMPANY
A Division of Union Carbide and Carbon Corporation
Carbide and Carbon Building UCC / Chicago and New York

The terms "Heliarc," "Oxweld," and "Ribbonrail" are trade-marks of Union Carbide and Carbon Corporation.

And now- eight!

TAYLOR-COLQUITT, at Spartanburg, So. Carolina—large suppliers to U. S. railroads—really knows costs in the pole and tie business. So when they bought their first American DiesELectric locomotive cranes, they watched expenses with an eagle eye.

Today, Taylor-Colquitt is operating their *eighth* 25-ton American DiesELectric. The two big reasons for these re-orders are: *more work done, less money spent.* To them, experience has proved that DiesELectric design (diesel power to the deck; electric power to the trucks) means not only more tonnage per day but a wonderful reduction of "down" time and repair expense.

If you would like to find out how American DiesELectric design has eliminated tons of wearing parts . . . how these cranes pay for themselves in five years . . . mail the coupon below.

Modernize...economize...with

American Hoist
& Derrick Company
ST. PAUL 1, MINNESOTA

69
American Hoist & Derrick Co. 1603-R
St. Paul 1, Minnesota

● Please send literature on
AMERICAN LOCOMOTIVE CRANES

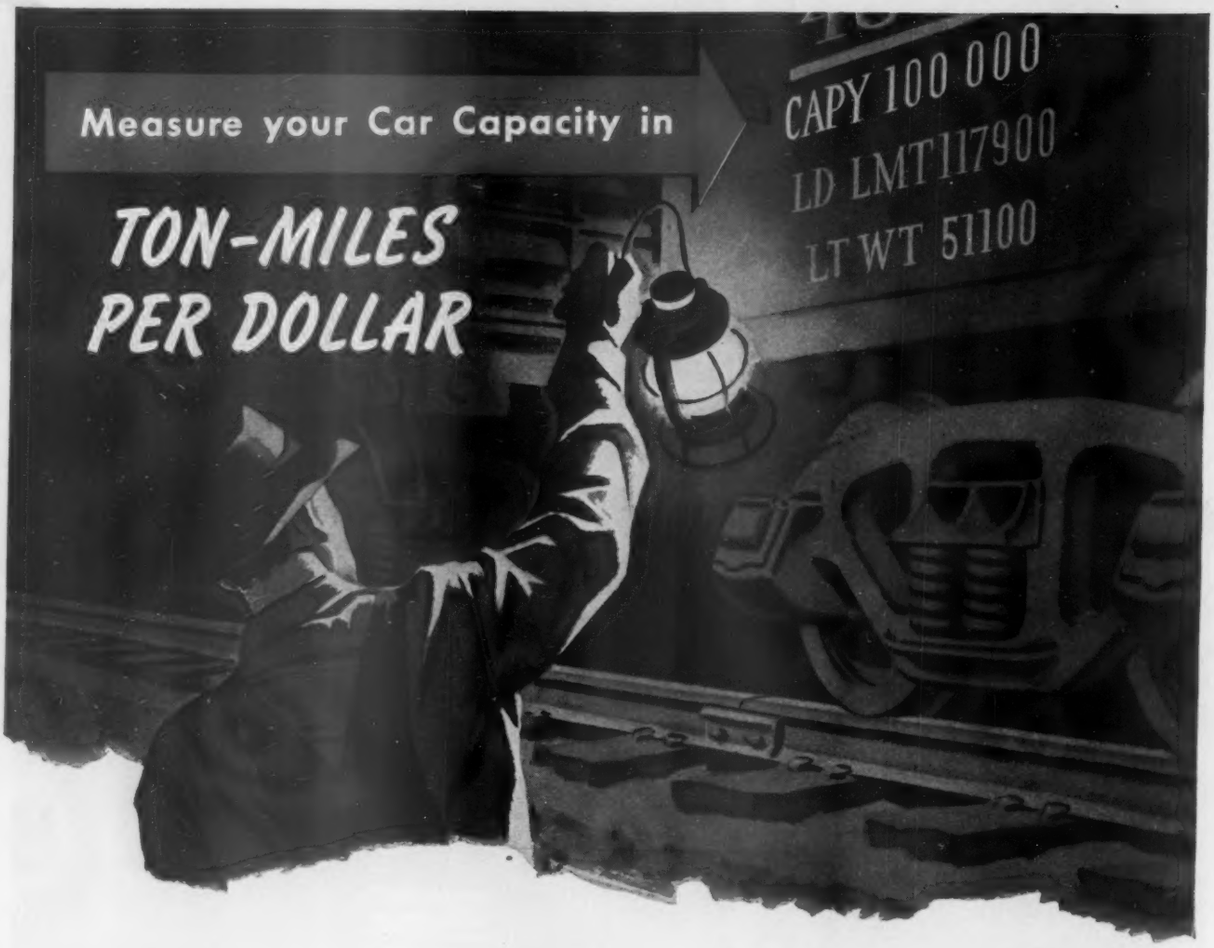
Capacity_____ tons ☐ Diesel ☐ DiesELectric

Name_____

Company_____

Address_____

City_____ State_____



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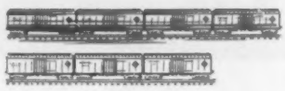

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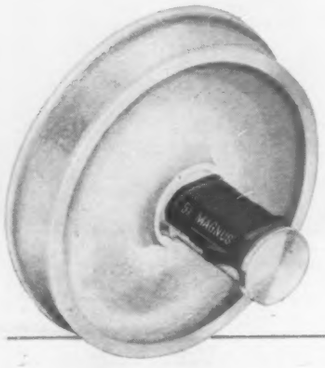

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MAGNUS METAL CORPORATION

Subsidiary of **NATIONAL LEAD COMPANY**

HOW BRIGHT IS THE LONG-RUN EARNINGS OUTLOOK?

In the present fortuitous upturn of railway traffic and earnings a kindly and patient Providence has once more given the railroads—and the American people—a further chance to secure commonsense dealing by the government with transportation, and thus forestall socialization. Will this opportunity—certainly the last one ever to be expected—be neglected and lost as happened during and immediately after World War II? Or will the railroads and their informed allies in shipping circles and the supply trade, this time, resolutely forego all temporizing and, finally, get down to dealing concretely with specific cases?

It surpasses all credence to see how seductive a few months of favorable traffic and earnings are in tempting most of us in and around the railroads to feel that "happy days are here again." Remember the popular slogan of the early forties—to the effect that "there's nothing wrong with the railroads that some more traffic won't cure"? We got the traffic and the opinion became entirely too general that our competitive, regulatory, labor and financial problems had been permanently solved. They weren't. Some chronic financial situations were measurably improved—but the basic problem of restoring a dependable level of good earnings was not touched; while the competitive and labor relations situations grew progressively worse.

Temporarily improved earnings during World War II gave the railroads and affiliated interests the wherewithal to engage in study and research—and the necessary educational propaganda—looking to the termination, or at least mitigation, of the evils which had culminated in the thirties in the destruction of railroad credit. This opportunity—except for the valiant and extensive efforts of the A.A.R.'s Railroad Committee for the Study of Transportation, which were given little effect in concrete action—was allowed to slip unprofitably away. There was certainly no tangible accomplishment regarding the basic issue of relations with government—indeed, the comparative position of the railroads in this area became much worse because of the greatly enlarged handouts from the public treasury to rival agencies of transportation. It will be a tragedy indeed if that unhappy history is now repeated.

Temptation Must Be Resisted

Granted that, in a time of chronic car shortage like the present, the temptation becomes almost irresistible to dismiss with impatience any "waste of time" with ways and means for securing a remunerative level of traffic five or ten years hence. Nevertheless, no matter how powerful this temptation may be, it *must* be resisted, or the railroads are practically finished as private enterprise. Let any one who doubts the truth of this unpalatable assertion turn to the remarkable book on railway earnings, just published by the University of Pittsburgh†, and authored by Professor Sidney Miller and several of his associates.

† "Rates of Return — Class I Line-Haul Railways of the United States 1921-1948."

This work presents in painstaking detail the somber figures on railway earnings, particularly over the past two decades, compared to those of other industries—regulated and unregulated. These figures lead the authors irresistibly to the discouraging conclusion that prosperity for the railways, under the conditions which now surround the industry, "may be experienced briefly in time of war, but does not necessarily continue even 'for the duration'." In the ten years 1937-46, the electric utilities earned 6.2 per cent on their investment less depreciation, plus working capital. The telephone and gas utilities did even better; and unregulated industry earned a great deal more than the utilities. In the same period (which included the "prosperous" war years), the railroads earned an average of less than 4 per cent. Over the entire period 1921-48 the railroad average was less than 3¾ per cent. Such earnings are insufficient to continue the railroads in private ownership—and time is running out for remedial measures. Either they must come soon or it will be forever too late.

The authors, having painstakingly and conclusively diagnosed the disease from which the railroads have chronically suffered for more than two decades, examine proposed remedial measures rather briefly. They make clear, however, their opinion that responsibility for taking the initiative in these measures lies with the railroads themselves. Even where the difficulties are wholly or mainly external, they insist that the duty devolves upon the railroads to "publicize widely all abuses" and "to leave no stone unturned in an effort to improve their own situation." It would be proper to go farther than Professor Miller and his associates do — and put this same obligation also upon the railway supply fraternity; upon shipping and financial interests; and upon any other Americans whose experience has acquainted them with the facts. If a citizen sees that a building has caught fire, it is his moral duty to spread the alarm and do what he can to put the fire out — even if he does not happen to be the regularly employed watchman assigned to guard this particular structure.

What This Paper Is Doing

As far as this paper is concerned, we have for a quarter of a century raised as much racket about the inequities of the railroads' competitive situation as anybody else in the country. Lately we have undertaken a more difficult, more costly, and more far-reaching program. We refer to the emphasis we are laying upon freight traffic in the first of our issues in each month. It is the aim of the articles in these issues to draw attention to specific instances of improved service to shippers, especially those by individual railroads; and to interpret improvements in railroad facilities in terms of the effect on service to customers—not merely how these improvements make railroading more convenient or less expensive. After all, the goal of all improved methods and equipment on the railroads is, or should be, better or more economical service to customers. By repetitive reporting of this kind we hope and expect that the cumulative effect may be (1) to secure greater recognition among shippers of the great efforts the railroads are already making in their behalf; (2) to strengthen the spirit of emulation among railroads, with each striving to do at least as much as the "other fellow" in the customer's behalf; and (3) to encourage all railroad departments to think of their work in terms of the end result, i.e., more satisfied customers. Only when the railroad industry has gone all out in putting its best foot foremost, and in publicizing its merits, can a public response be counted upon sufficient to secure for the industry the legislative and regulatory remedies it so badly needs. An effective effort in the direction of this paper's editorial program has such tremendous and obvious possibilities for good—

U. S. HIGHWAY AID TIED TO LAW-BUSTING FIRM

By JAMES DANIEL
Scripps-Howard Staff Writer
(Reprinted by permission from the New York World-Telegram & Sun)

WASHINGTON, March 30. — John L. Fraley, adviser to James K. Knudson, head of the Defense Transportation Administration (DTA), is on leave from a trucking firm that has been caught in 665 violations of Virginia's truck weight laws.

Mr. Fraley was assistant to the president of the Carolina Freight Carriers Corp. of Cherryville, N. C. Now he is "consultant on street and highway maintenance" to Mr. Knudson.

And Mr. Knudson, as head of the DTA, recently wrote to all state Governors urging, for the sake of national defense, that they ease up on their truck-weight laws in order to speed up the movement of truck cargo.

Mr. Fraley said he met his government boss last September while serving as his host at a North Carolina truckers convention. About that time Mr. Knudson, an Interstate Commerce Commissioner, was appointed to perform the transportation duties arising from the Defense Production Act. By his own decree, Mr. Knudson then created the Defense Transportation Administration, with himself as head.

The head of the company for which Mr. Fraley worked was also president of the North Carolina Truckers Assn.

Many big East Coast trucking firms are headquartered in North Carolina, which has milder truck laws than some other states. Recently a move in the North Carolina Legislature to bring the state's code into line with Virginia's and the recommendations of the American Assn. of State Highway Officials was stalled by a telegram from Mr. Knudson.

Virginia Highway Director J. A. Anderson is currently head of the American Assn. of State Highway Officials, which is leading a fight against the DTA. The highway officials say the DTA is trying to break down the enforcement of state truck laws. Mr. Anderson said he now has round-the-clock weighing stations on main North-South routes and weighing stations at 40 other Virginia points. He said the truckers have private cars traveling the state highways at all times spotting the weighing points and warning truck drivers up and down the line. But some individual truck drivers, he said, are assisting the enforcement program.

[Mr. Knudson's letter to state governors was reported in *Railway Age* of March 19, page 71.]

alike to railroads, manufacturers, shippers and the general public — that we are quite unashamed and unrestrained in actively soliciting support for this program by all directly interested individuals and companies.

Under present circumstances, how can anyone in or around the railroads, with a knowledge of the facts and the power of speech, excuse himself if he is not a crusader, or the active supporter of those who are doing the crusading in his behalf?

BARGAIN-RATE MOTOR-TRAIN TRIAL

One of the more promising possibilities for reducing the losses normally incurred in operating branch-line, local and other types of normally unprofitable passenger runs is through the employment of some form of motor train. Where traffic-building possibilities are present, the preference would fall, of course, to all-new equipment. Where such opportunities are entirely absent, and it is desired to hold the expenditure for the trial to a minimum, old gas-electric cars can be converted to diesel-electric drive.

Both new rail cars and converted ones can serve a variety of specific economic functions, and are complementary to each other as well as somewhat competitive with each other. By converting old gas-electric cars, which have never been very satisfactory, to modern diesel-electric drive with today's advanced engines, a railroad can gain some idea of the advantages and limitations of self-propelled car operation under today's conditions with today's power plants. An opportunity will be afforded to study the operating possibilities, the reliability, the fuel cost and the maintenance cost. For the additional cost of modernizing the passenger-carrying space, some idea can be gained as to whether it might be possible to increase traffic as well as to reduce costs.

Several situations exist where it may be worth while to convert a gas-electric to diesel. Converting an existing car on an existing run to diesel should give better operation at lower cost because of the improved power plant. Where a run has been discontinued, consideration might be given to converting the car, installing an engine of higher horsepower if necessary, to replace a two-or three-car locomotive-powered train. One road made such a conversion, producing a unit capable of pulling one trailer, for only $36,000, including modernization of the interior and exterior of the car.

Neither the installation of new rail-car equipment nor the modernization of old has received too much consideration because the runs which would be replaced are normally operated at substantial losses, and might not be able to show a profit despite the improved equipment. Even in those cases where the only gain would be a reduction in the loss, however, this is as useful a return on the investment as increasing a profit by the same amount, and it has the same effect on the overall net income.

"TRANSCENDS PARTY LINES"

"In the face of tremendous outlays for national defense, the managers of the federal bureaucracy propose the largest budget for peacetime departments in the nation's history. If Congress rubber-stamps its tax proposals to meet the burden of such costs, the total tax bill of the nation will be 60 per cent higher in 1951 than in 1950. The budget of every peacetime department must be completely overhauled. In many, if not in most of these agencies, there are possible savings, ranging up to 50 per cent.

"In the past 15 years a group of Fabian socialists has built in America the most powerful and effective political machine in the world's history. The direction of this machine is clearly established and its progress has been consistent. Its propaganda is financed largely with the taxpayers' dollars, with our citizens frightened into the belief that their welfare will be imperiled, the independence and security of the Republic destroyed, unless all proposals of the taxing, spending, vote-buying administration are immediately followed.

"In 1951, politics are so co-mingled with economics that it is difficult if not impossible to appraise correctly any major problems without weighing the implications of these interrelated trends.

"It is self-evident to every American citizen that the United States could have a clear-cut and thoroughly constructive foreign policy, but such is not in the interests of the Fabian doctrine. By our very acts of omission we have encouraged the onward march of Communism. Both political parties have compromised on fundamental principles for 15 years.

"Transportation does not exist in a 'vacuum.' In 1951, it is the largest segment of the nation's economy. Over $100 billion dollars of private and government funds, or nearly one-fifth of the capital values of the nation, are invested in the function of transportation. Failure to maintain competitive private ownership of these vital public services would be a fatal blow to other segments of the economy. Likewise, what happens to agriculture, industry, and finance—and what happens in government—develops trends which could inevitably lead to nationalization of transportation.

"The transportation problem is the most complicated of all domestic issues. It has become a strange mixture of economics and politics. Its solution requires the assumption of personal responsibility on the part of all types of leaders. The problem must be lifted completely away from the play of pressure groups and the influence of power politics."

"State socialism—of the British pattern—is a form of receivership for a society which has reached the brink of Communism. The greatest menace to economic freedom and liberty is the fact that the same group of Fabian socialists who started us down the road to totalitarian government 20 years ago are still in the Washington saddle. To drive them out is a problem which transcends party lines. Neither private ownership of transportation nor of any other enterprise is safe until this is accomplished."

—From an address by Donald D. Conn, executive vice-president of the Transportation Association of America, to the association's Southeast Regional Forum at Atlanta, Ga., March 27.

COLLEGE TRAINING IS NOT REQUIRED for admission to the Advanced Management Program—These older students, however, thrive in the academic atmosphere and look like any group of college students, except maybe for more gray hair, or less of it

Many large industries, including railroads, are assigning promising officers to intensive training in modern managerial technique —to improve leadership and, consequently, company results

Giving a Supercharge of "Know-How" to Rising Managers

A program for taking company officers who have already attained success in business and industry, and equipping them with the modern managerial knowledge which experience indicates most likely will still further improve their performance—to the benefit of their employers as well as themselves—has been in progress at the Harvard Business School at Boston, Mass., since 1943.

Most of the leading American industries, including a few railroads, have been represented in these study courses, known as the Advanced Management Program or AMP. Each course is of three months' duration, one each fall and another in the spring. A total of 150 students can be accommodated at one time. The esteem in which industry—and managers alert for self-improvement—hold this program is best gaged by the fact that approximately twice as many applicants are seeking admission as the school has the facilities to accommodate.

Inculcating Top-Management Attitude

The program is aimed, in particular, at giving men who have mastered one department of a business the initiation they need in lifting their sights to encompass the business as a whole. Without such "conditioning," it occasionally happens that a successful department head never acquires the attitude needed to qualify for maximum performance in a top management position. The Business School has embarked on a study of the human relations involved in being an able administrator, and the Advanced Management Program aims to give its participants a better understanding of this vital phase of administration. In addition, an attempt has been made by the school to place the business situation in the proper perspective with regard to its external environment—in other words the Advanced Management Program emphasizes the company's responsibility to the public, to its employees, and to government. The development of such philosophies is an integral part of the objectives of the AMP.

The eighteenth of these AMP sessions was held from September 13 to December 8, 1950, and the nineteenth is running from February 28 to May 25, 1951. Regular dormitory accommodations are set aside at the school to house these 150 students from industry, as well as the approximately 1,200 regular graduate business students (mostly young men in their twenties), who are working for their Master's degrees. The self-styled PBE's ("pot-bellied executives") of the AMP courses use this term to differentiate themselves from the regular graduate students. Not the least of the advantages which participants in the AMP program claim for it is the close acquaintance they gain from intimate proximity with so many men of equivalent rank in a wide range of industries—as well as from the college atmosphere they obtain from contact with the regular graduate students and faculty.

At the eighteenth session, concluded last December, the average age of the participants was 43½ years, with the age range running from 35 to 55. Their average years of practical business experience were 20. The average salary earned by members of the group was $18,000. Few of the AMP students fall below the $10,000 salary level and there have been a few in the six-figures bracket. There are no academic prerequisites for admission. Of the 150 participants in the eighteenth session, 25 (i.e., one-sixth) had no background of college or university

attendance whatever. Selection is made among applicants because of what they have accomplished in business and industry—and their likelihood of profiting from, and contributing to, the program. However, while an academic background is not a prerequisite for entrance or success in the program, it is no handicap either. At the eighteenth session, there were among the participants 19 who held Master's degrees, while four had Ph.D.'s, two had LL.D.'s and one was an M.D.

Practically all the teaching staff at the school have extensive business experience and are currently engaged in consulting work for important enterprises—hence the quality of instruction is not on the "theoretical" or "impractical" level. At the same time, it is not on the "shirt-sleeves" level either—here's-how-you-do-it-but-don't-ask-why. The Harvard Business School endeavors to give its students an opportunity to develop a philosophy of business—not merely information about business methods. The instructors who conduct the AMP classes have, for the most part, extensive experience with adult students and hence do not waste time with the elaborate simplification sometimes required with inexperienced college-age groups.

Some of the participants—10 or 15—in the courses come from abroad, and the Armed Services are also well represented. Apart from the military, 116 different companies had representatives at the eighteenth session last fall. The petroleum and related industries had the largest representation, with 35 participants. Iron and steel had 15; the electric supply industry had 10 representatives; and the grain milling business an equal number. Two airlines were represented, and two railroads. In a parallel educational program which the school offers for trade union officers, there were three participants from the railway labor organizations. These men attended the labor relations classes with the AMP students; all other subjects taken by the trade union representatives were separate and apart from the advanced management course.

The Employer Pays the Bills

Employing companies nominate the men whom they wish to have attend these courses—and customarily pay their regular salaries, tuition charges and living expenses while in attendance. Since not all applicants can be admitted, the school has to make a selection—seeking to get diversity, both geographically and in the range of industries included; and to limit itself to men with proved records of success, "a marked degree of intellectual curiosity and flexibility," and "inherent ability to climb in the company's organization." Of the members of the eighteenth session, 3 were presidents of companies, 25 were vice-presidents, 9 were sales managers, 31 were managers of various other departments (labor relations and personnel), 13 were superintendents, and there was quite a contingent, also, representing the engineering, purchasing, accounting and financial departments. This program is not a peacetime luxury, to be laid away in time of war. On the contrary, the program was initiated in 1943, right in the middle of World War II, on the assumption that in times of peril, when efficient production is of predominant importance, an effective means of improving management performance is not a luxury but a matter of highest practical value.

Instruction at the Harvard Business School is carried on predominately by the "case method." That is to say, the student does not read some textbook writer's opinion of the way things should be done and then recite to an instructor what he has read—instead, the school has collected many thousands of actual problems which have

DONALD KIRK DAVID, dean of the Harvard Business School, is a director of the Ford Motor Company, General Electric Company, First National Bank of New York, R. H. Macy & Co., American Maize Products Company, and Aluminium, Ltd. He is a trustee of the Ford Foundation and of the Rockefeller Institute, and a former president of the Royal Baking Powder Company

arisen in specific businesses; and instruction consists, primarily, in discussion by the students in the classroom and among themselves of their ideas as to how these problems might best be solved. By this process, original thinking is called for at all times, and the instructor is more of a skilled leader of discussion than a pundit who lays down the law for the students to memorize. The idea is to get the students into the habit of vigorous use of their own brains on problems which are novel to them—rather than to come away with nothing more than a memory of what the professor may have happened to think.

There are six regular courses of study which are pursued throughout the entire three months' period. In addition, there are weekly lectures by prominent "outsiders" (business and academic) and one or two "seminar" discussions a week on specific subjects (e.g., incentive pay, the federal debt, management organization, and panel discussions by union and management representatives of specific companies). In addition, one "tour" of a representative large enterprise in the Boston area is arranged each week. The six regular courses (class discussion of specific cases, the participants coming well fortified with ideas stimulated by prior assigned reading) are as follows:

I—*Administrative Policies*—overcoming the narrow departmental view in the endeavor to arrive at company decisions at the top-management level with the welfare of the whole company in mind; assessing a company's present position realistically in the light of changing circumstances, with the objective of setting goals to accord with possibilities, and adopting effective methods to attain these goals.

II—*Administrative Practices*—essentially a "human relations" course, to train the student in the development

of a cooperative frame of mind in contact with other people, whether superiors, counterparts or subordinates —an attitude and technique for "getting along with people."

III—*Business and the American Society*—what business and industry contribute to America, business ethics, and the extent to which government control of business is explainable or justifiable; what the public responsibilities of a leader of business are, over and beyond the direct management of his own company.

IV—*Cost and Financial Administration*—those aspects of business operations which are properly controlled by accounting, statistical and budgetary techniques—with consideration as to how much weight should be given to cost factors in situations where human and other intangible factors are also important.

V—*Marketing Management*—how to decide upon what and how much to produce, how to stimulate demand, and how to establish prices—coordinating production and sales, and determining promotional and sales policies—problems of procurement.

VI—*Problems in Labor Relations*—effective methods of dealing with employees and union officials, administering union agreements, securing constructive relationships with unions.

Winning Influential Friends

The program of classes, seminars, tours, and addresses is full enough, with outside reading—some 26 standard books (typical titles are shown in an accompanying tabulation) and some 75 pieces of pamphlet literature—to keep the participants at least as busy as if they were at home on their regular jobs. Absence of customary social contacts, and concentration of practically all of the 24 hours of every day in the week in the company of other AMP students, keeps the "shop-talk" average high, thereby maximizing the educational value of participation. Attendance at one of these courses could scarcely be classified under the heading of a restful furlough at the employer's expense.

A representative of a railroad who recently participated in this three-months' session emphasizes *the public relations value to the railroads* of having competent railroad representation in these courses—that is, twice a year to have the railroad viewpoint adequately put before 150 men, each one of whom has attained, or is probably destined for, top leadership in some important branch of industry. This informant reports that most of his fellow-students were interested in transportation and were glad to have the situation of the railroads, insofar as it touches upon the welfare of other industry, explained to them. Because of this interest, this experienced observer believes it would be a disservice for the railroads to send men to such a course who are not able to give intelligent and satisfactory answers to all questions likely to be asked them about the railroad industry.

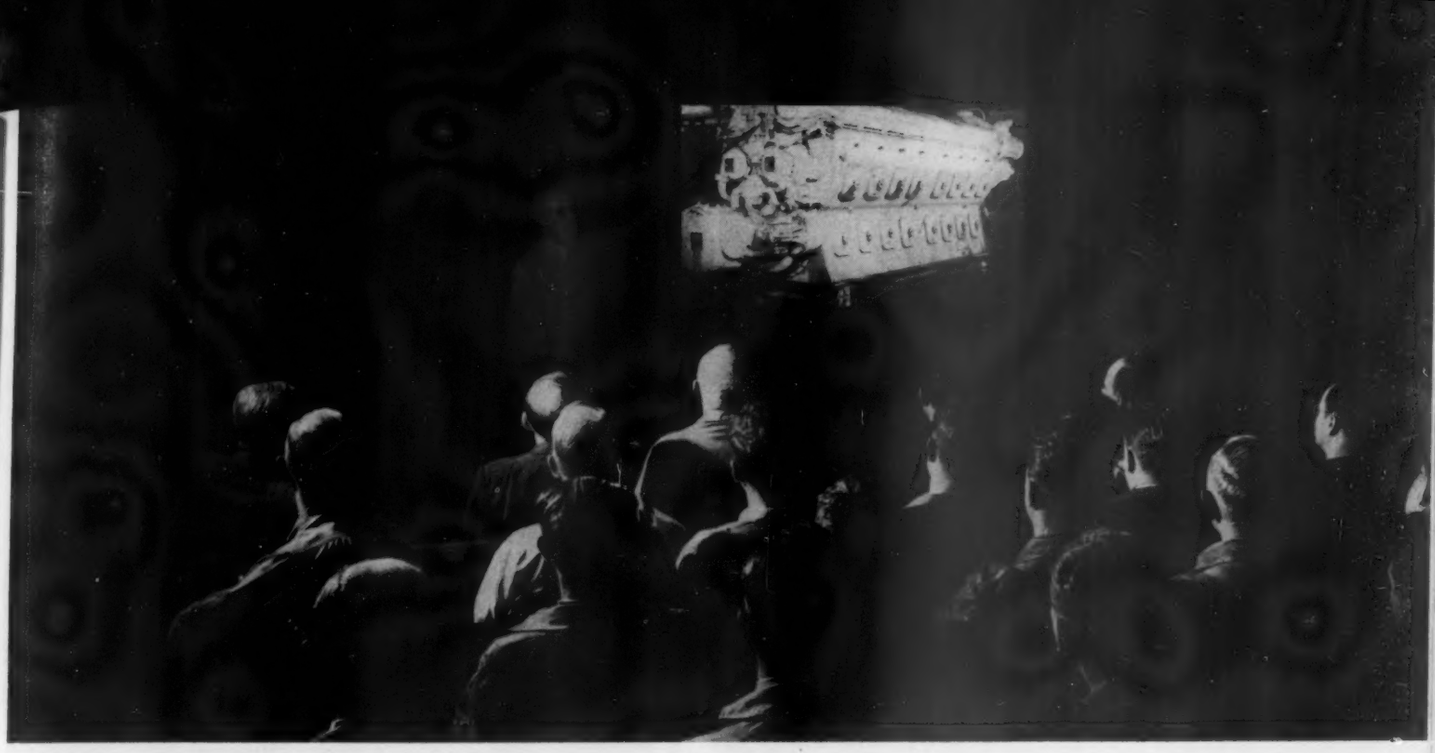
This railroad informant offers the further opinion that "the younger the man is, the more he is likely to *get out* of such a course as this, but the more mature he is, the more he is likely to be able to *put into it*," in the way of promoting a better understanding of current and chronic transportation problems by leaders in other industries. This witness is enthusiastic about the benefit he personally has gained from the course; and believes he is passing this benefit along to his employer in improved performance of his managerial duties.

Some of the Books Used in the Advanced Management Program:

Controlling Factors in Economic Development, Harold G. Moulton, *Brookings Institution.*
Unions, Management, and the Public, Bakke and Kerr, *Harcourt, Brace & Co.*
Trade Union Wage Policy, Arthur M. Ross, *University of California Press.*
Management and Morale, F. J. Roethlisberger, *Harvard University Fress.*
The Union Challenge to Management Control, Neil W. Chamberlain, *Harper & Bros.*
Management and the Worker, F. J. Roethlisberger and W. Dickson, *Harvard University Press.*
The Functions of the Executive, Chester I. Barnard, *Harvard University Press.*
The Board of Directors and Business Management, M. T. Copeland and Andrew R. Towl, *Division of Research, Harvard Business School.*
The Board of Directors in Small Corporations, Myles Mace, *Division of Research, Harvard Business School.*
Leadership in a Free Society, T. North Whitehead, *Harvard University Press.*
Effects of Taxation, J. Keith Butters and Powell Niland, *Division of Research, Harvard Business School.*
Organization and Management, Chester I. Barnard, *Harvard University Press.*
The Social Problems of an Industrial Civilization, Elton Mayo, *Division of Research, Harvard Business School.*
The Social Costs of Private Enterprise, K. William Kapp, *Harvard University Press.*
Maintaining Competition, Corwin D. Edwards, *McGraw-Hill.*
Human Destiny, Lecomte du Nouy, *Longmans Green & Co.*
The New Society, Peter F. Drucker, *Harper & Bros.*
Labor Relations and Human Relations, B. Selekman, *McGraw-Hill.*
**Procurement: Principles and Cases,* H. T. Lewis, *Richard D. Irwin.*
**Problems in Labor Relations,* Selekman, Selekman, and Fuller, *McGraw-Hill.*
**Problems in Marketing,* McNair and Hansen, *McGraw-Hill.*
**Readings in Marketing,* McNair and Hansen, *McGraw-Hill.*
**The Administrator—Cases on Human Relations in Business,* Glover and Hower, *Richard D. Irwin.*
†*Business Policy*—Loose-leaf book of current case studies.
†*Cost and Financial Administration*—Loose-leaf book of current case studies.
†*Business and the American Society*—Loose-leaf book of current case studies.

*Textbooks.
†Case material for use in Advanced Management Program classroom discussion only.

The above list of books includes only some of the titles used at the 18th session of the Advanced Management Program, in the Fall of 1950. The list is not rigid, and changes from one session to another.



Teaching Teachers at Electro-Motive

Specialized course at Diesel Locomotive Training Center prepares railroad instructors to teach classes on individual lines in big joint educational program

If railroads were to receive no more new diesel motive power in 1951 than that already delivered, they still would be confronted with a major training problem which, in the last analysis, can be delegated to no one, but must be solved in their own organizations. Assuming adequate steel and other materials to keep builders' plants in operation (an assumption of utmost importance in the national interest), it seems probable that about 3,500 diesel locomotive units will be delivered this year to help railroads meet both normal and emergency needs for motive power.

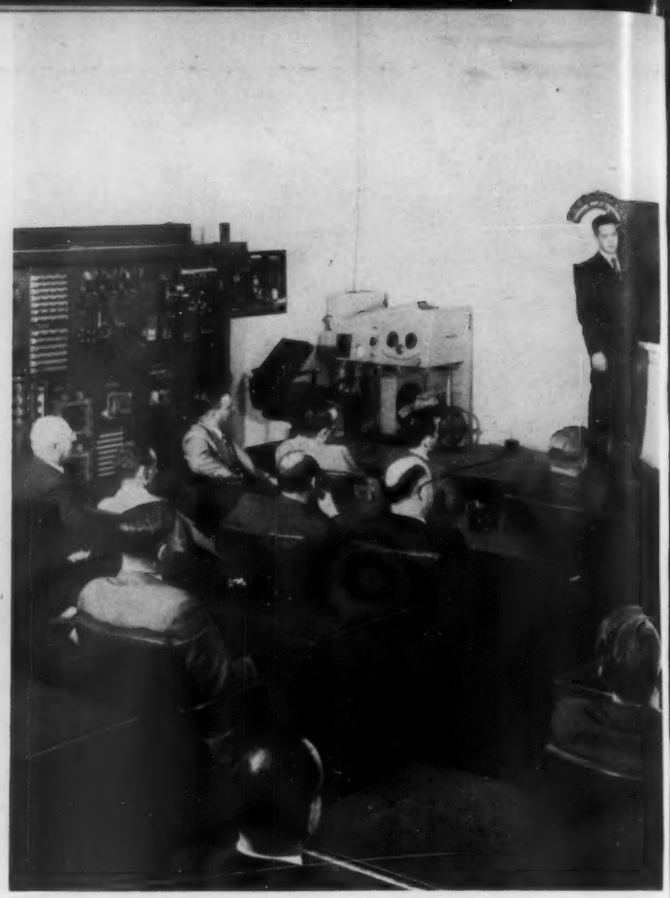
To maintain and operate this amount of power will require an estimated 7,000,000 sq. ft. of new shop space for diesel servicing and repairs; 10,000 additional enginemen and firemen trained to operate diesels; 5,000 more shop and service men, and at least 500 supervisors, instructed in the special requirements of diesel locomotives. In other words, about 15,000 railroad men will work on diesel locomotives for the first time in 1951 and will require quite intensive training if full availability and utilization of the motive power is to be realized.

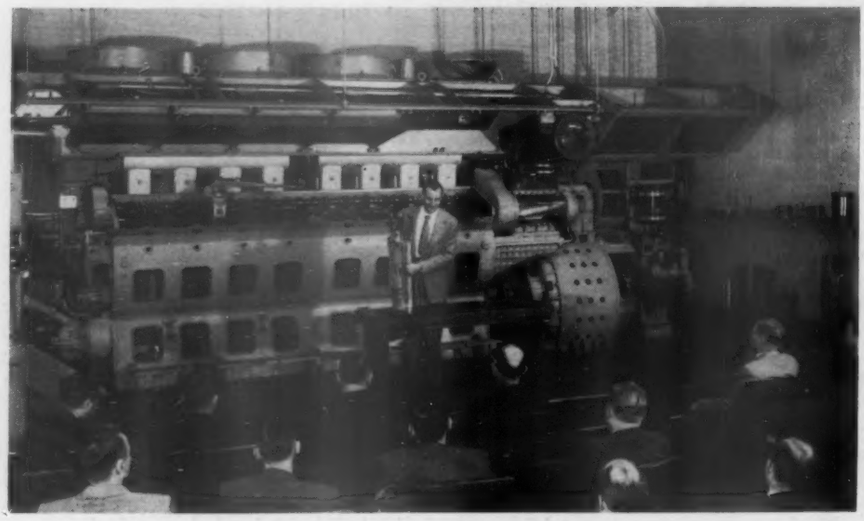
Cooperative Program Needed

A review of conditions indicates the urgent need for a big cooperative educational program by builders and railroads alike. Manufacturers' schools have in the past carried the major load of diesel training and one of them, for example, the Electro-Motive Division of General Motors, has given basic instruction to over 10,000 railroad men at the Locomotive Training Center at La-Grange, Ill. In addition, two E.-M. instruction cars have been used for classroom work by about 65,000 men on individual roads throughout the country. Assuming an average stop of one week at a place, these two cars can cover only 100 railroad points a year whereas this one manufacturer, alone, will deliver locomotives at 500 different points.

Railroads, also, have equipped a few air-brake and other cars for diesel instruction and encouraged the establishment of diesel clubs at local shops which serve a most useful purpose, but this effort should be greatly extended. The consensus is that, with about 15,000 railroad men to train in diesel locomotive fundamentals this year, manufacturers will be able to reach only approximately 5,000 and railroads will have to find some means of supplying instruction to 10,000 men in schools or classes on their own lines.

An important help in this direction was the action of Electro-Motive a number of months ago in developing an advanced 60-day course for railroad men who show special promise as instructors. The instruction is both intensive and extensive. Only four men take the course at one time and emphasis is placed on classroom presence and teaching ability as well as specialized knowledge of construction, operation and maintenance details. Fif-





Above left—Studying wiring diagram at C. & E.I. Diesel Club, Danville, Ill. This room, built in a shop, is equipped with a blackboard, slide and movie projectors, various charts and cutaway parts

Above right—One corner of fully equipped classroom where all electrical details are studied on a live panel

Left — Railroad class studying engine details in the mechanical classroom at the E.-M. Training Center

teen men have been graduated from this course to date and returned to their respective railroads where they are instrumental in organizing courses of great value in the cooperative instruction program.

E.-M. Classes Since 1934

In October 1934, coincident with the first diesel streamliner, the late H. B. Ellis, then service manager of Electro-Motive, enlisted help from the General Motors Institute at Flint, Mich., in conducting a series of courses to familiarize railroad men with the basic principles of diesel locomotives. Classes were planned and railroads invited to send representatives, but without too enthusiastic response. In a typical comment, one mechanical department officer said in effect that he had no diesel locomotives in service, on order, or contemplated — but this road has since gone exclusively to the use of diesel power.

In spite of restricted attendance, successful classes were held at Flint and in April 1936 a representative railroad wrote to Electro-Motive suggesting the desirability

of a diesel school at LaGrange to instruct railroad men in the art of handling and taking care of the new diesel-electric locomotives. The first diesel instruction car, No. 100, was converted from a baggage car early in 1937 and the LaGrange plant school started in the fall of that year.

Both the instruction car and school featured cutaway models of engine parts, high- and low-voltage cabinets, speed control and air-brake equipment, steam generator, circuit diagrams, blackboards and movie sound projectors, all of which helped carry instruction to classes of enginemen, firemen, road foremen, electricians and mechanics, as well as a few superintendents of motive power and other higher officers. This work continued until World War II when the school was closed from 1941 to 1944; E.-M. instructors were loaned to the Navy to give instruction regarding engines installed in landing craft.

In 1945, the school was reopened for supervisors or potential supervisors — in other words, a "teach the teacher" policy was established. In October 1947 Electro-Motive offered for the first time an advanced, or post-graduate, class open for men who had completed the basic two-week class, or who had been working with the equipment for at least two years. Evening classes were started the following month for railroad personnel in the Chicago area. The purchases-and-stores school was initiated in February 1949, so that stores personnel can receive information relative to the whole locomotive as well as an answer to their specific questions about diesel materials. A second diesel instruction car, No. 200, was built in 1950 and especially equipped to carry information regarding the latest correct maintenance procedures to individual roads.

Early in 1948, the need for more railroad instructors became apparent and Electro-Motive began training several selected men who would return to the railroads and conduct classes in school cars or in temporary classrooms set up on railroad property. Because of increased requests indicating railroads' desire to become self-supporting in the educational field, a "Sixty-day Personalized Instructor-Training Program" was developed with classes limited to a maximum of four men and most of the time spent in the shop with an instructor to point out approved methods of reconditioning, building and maintaining. A general outline of the course follows:

Instructor-Training Program

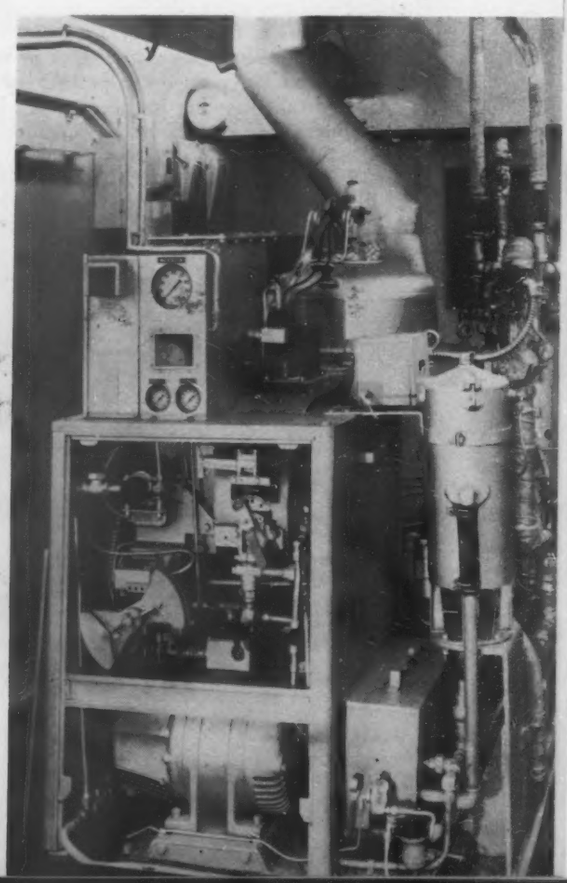
Service School (Basic): Student attends the basic two-week class at the training center. Here he is given an opportunity to see instructors in action, learn teaching techniques and locomotive fundamentals.

Crankcase and Oil Pan: Details of engine crankcase and oil-pan construction are given, identifying the component parts. The plumbing stack, or accessory rack for the engine, holds such essential equipment as lubricating oil filters, coolers, water tanks, and fuel pumps, and instruction is given covering details of each. The student is taken into the plant to view actual machining operations on a crankcase and oil pan. Various stages from the rough welded parts received to the finishing operations are studied in detail.

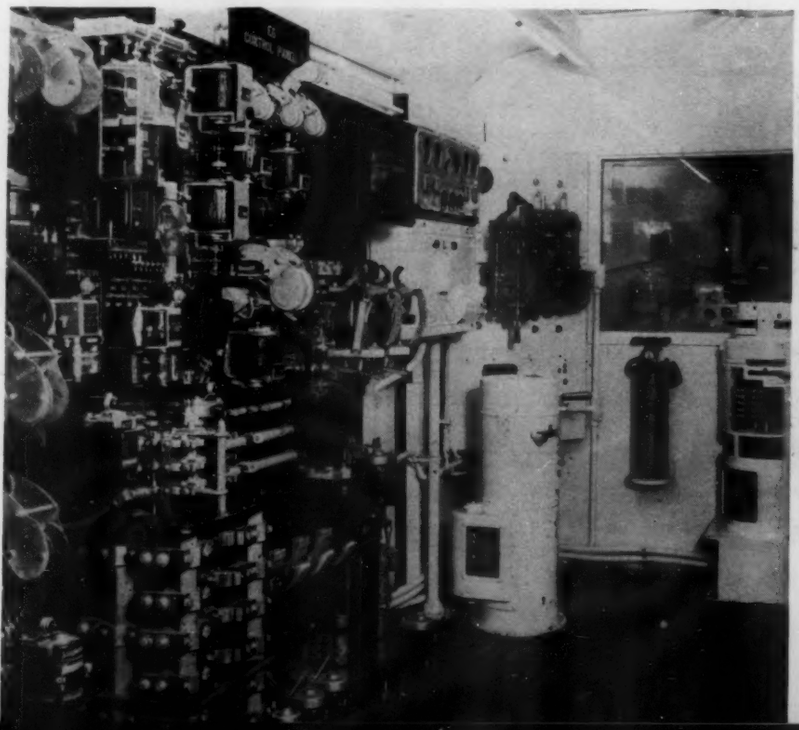
Sub-assembly of Engine Parts: Internal and external parts making up the engine are studied with emphasis on latest design improvements such as the new No. 3 liner using the ferrule-grommet sealing arrangement between liner and head. Various liner and head combinations are considered with respect to adapting and interchanging both new and older equipment.

Injector and Governor Room: The student, along with his assigned instructor, visits the shop injector and governor room. Equipment returned by railroads for repair can be seen going through the various stages necessary to restore their usefulness. Test stands have been built for properly testing governors, simulating the actual

Right—Live steam generator set up for operation and study in Car 200



Below—Live electrical panel and controls installed in Car 100



conditions which would occur on the locomotive.

Final Engine Assembly: The flow of material, engine parts and accessories can be viewed as they are installed on engines moving through the engine assembly line.

Engine Test: Newly assembled engines, right off the line, go to test where they are operated for ten hours, at least seven of which are under full load. Observations may be made showing details of test and the type of data collected and inspections made.

Engine Service Repairs: Engines returned from the field for repair can be observed being rebuilt. The student studies the damaged parts, determines the cause of such occurrences, and preventive measures that could have been employed. Engines going through this section are worked on in a manner similar to that on railroads having the specialized equipment necessary.

Service School (Advanced): The student attends the five-day advanced class being conducted by the training center. Here he can further observe techniques employed by the instructor in conducting this specialized class where important locomotive components such as the engine, governor, steam generator, and automatic transition are studied in detail.

Buildup of Generators and Motors: In electrical equipment, such as motors and generators, students observe the painstaking work of machining, coil winding, commutator construction and final assembly of the motor or generator from the component parts.

Testing of Motors and Generators: Motors and generators are given exhaustive tests before being accepted for locomotive installation. The tests and methods used in testing can be studied in detail.

Electrical Service Repair: The student follows repair operations on generators and motors which have been in service. The repair work necessary on such equipment is variable, depending upon the condition of the part and desires of the railroad. Minor, as well as major, repairs are handled.

Assembly of High-Voltage Cabinet: The high-voltage cabinet on all locomotives is designed so that maximum electrical equipment can be installed in minimum space without crowding the equipment to make maintenance difficult. This cabinet is composed of panels containing both high- and low-voltage equipment. Each item is discussed in detail, showing its need, method of operation and maintenance.

Truck Assembly: How are wheels and ring gears pressed on axles? How are traction motors installed in the trucks? How are trucks installed under the locomotive? Such operations as these and many more in truck assembly can be seen by actual shop observation.

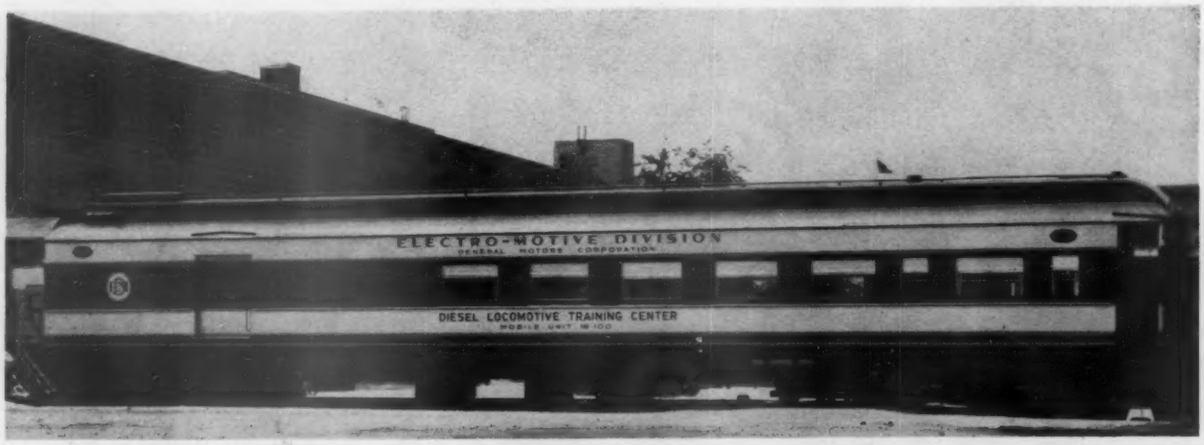
Complete Assembly of Locomotive: The flow of all locomotive components, each completely finished, tested, and ready for installation, is observed. Construction of the locomotive body, underframe, and cab sections is seen and their subsequent assembly into the finished product.

Locomotive Test: Completed locomotives are sent to the test department for final inspection and load testing on a newly installed "treadmill," which permits more complete inspection and adjustment to service requirements.

Student Serves as Instructor: The student is given an opportunity to get his material together and deliver a talk before the class. Constructive criticism is offered both on subject matter, method of delivery, teaching technique, and use of visual aids and blackboard. Electro-Motive officers feel that no better method can be used to evaluate the results of instruction than to have the student become the instructor, thereby developing confidence in himself speaking before his own associates at the training center.

Conference: Before completion of the course, the student confers with the educational director who explains the availability of various training aids, most of them free of charge, and others available at a small cost, also the necessity of providing different kinds of visual aids in accordance with each railroad's particular requirements.

Railroad participation in the instructor-training program outlined has been encouraging to date, but needs to be widely extended in view of growing evidence that manufacturers can no longer carry such a large share of responsibility for teaching the many new men now requiring instruction in diesel locomotive operation and maintenance. Adequate employee training in diesel fundamentals is an imperative and growing requirement which apparently will confront railroads for years to come. Expenditures to provide an organized educational program in well-equipped school cars or classrooms and led by qualified railroad instructors are essential to securing satisfactory returns on the great investment in diesel power.



E.-M. Diesel Instruction Car 100 equipped to teach both operation and maintenance

Replacement of steam locomotives poses difficulties in recovery of as much as possible of the capital invested in facilities for repairing and servicing this type of motive power

Coaling stations are among the facilities that are rendered obsolete by the dieselization programs of many railroads today

Effect of Diesels on Obsolescence

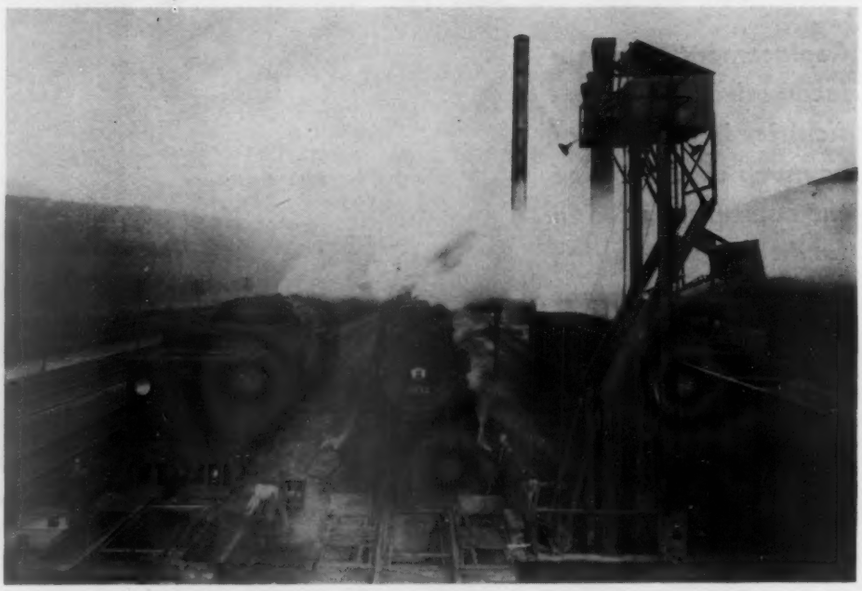
By J. B. AKERS
Chief Engineer
Southern System

Dieselization of the American railroads has grown by leaps and bounds during the past ten years, and with exceptional rapidity in the past four or five years. The program has affected all departments of the railroads in some way. A number of railroads are now completely dieselized. Most of those that are 100 per cent dieselized are short-line roads, but there are many larger railroads that are well along in their program toward this objective. Dieselization will continue at a rapid rate for some years because of the improved operating conditions and the economies that result.

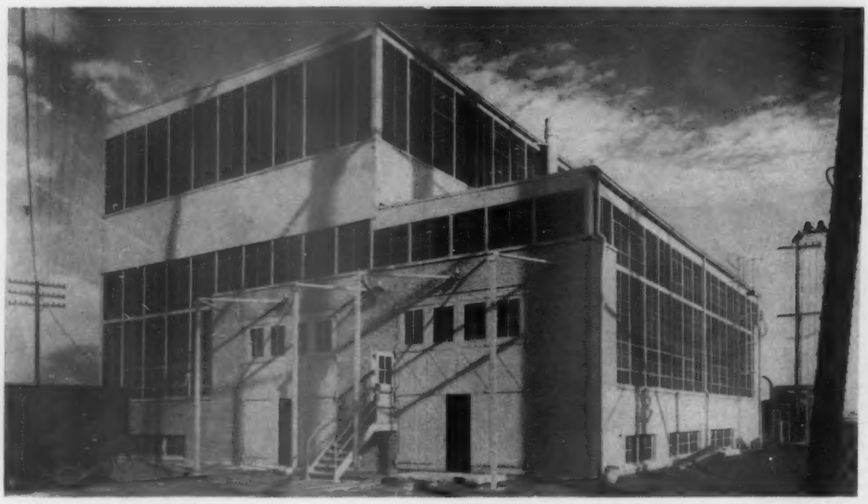
The changeover from steam to diesel power is far-reaching and truly revolutionary in its effect. The railroads were fully equipped with steam locomotives and all necessary servicing facilities for them, such as roundhouses, machine shops, boiler shops, blacksmith shops,

This article is adapted from an address at the recent convention of the American Railway Engineering Association at Chicago, in connection with the report of the Committee on Records and Accounts.

Above—The great amount of space that had to be provided in steam locomotive repair shops becomes largely surplus when diesels come into the picture



Right—Cinder-handling plants, as well as all other types of facilities for servicing steam locomotives, are subject to "extraordinary obsolescence" when their usefulness is destroyed by complete dieselization



Left—Diesel repair shops are not only entirely different in design from those required by steam power but may have to be provided at different locations

and fuel and water stations. Passing tracks and yards were of a length suited to operation with steam power. Then comes a changeover to diesel power in the course of a very few years. Suddenly the greater portion of existing shop and wayside facilities becomes obsolete—not suited at all to diesel operation. New shop facilities suited to diesel maintenance and overhaul must be built, and we must quickly provide fueling stations to issue diesel oil and lubricating oil, construct longer passing tracks and longer yard tracks.

Shop facilities in a location which was suited to steam operation may be found entirely unsuited to diesel operation. Shops and other facilities must be abandoned and new facilities constructed. The facilities abandoned are obsolete and altogether useless to the railroad. Every railroad has an enormous investment in such facilities. Land and buildings may be sold to some revenue-producing industry but this will recover only a moderate percentage of the loss. Railroad-type buildings are often unsuited to other business.

Recovering Invested Capital

The railroads have applied depreciation accruals on roadway property as a deduction from income for the past eight or nine years, but very substantial sums of invested capital still remain to be recovered when these obsolete facilities are finally and completely withdrawn from service.

The facilities made obsolete through the substitution of diesel power for steam on the Southern system have a value approximating $50 million. We will have to wipe out this investment, and at the same time make another investment of a very substantial sum to provide the needed facilities for diesels. The financial impact is tremendous. We must find a means to recoup as much as possible of the original investment by whatever means are allowed.

The Bureau of Internal Revenue has recognized these conditions. Its Bulletin F, January 1942, page 3, provides for obsolescence in a program of abandonment. Briefly, it is a method by which properties to be abandoned can be listed for amortization. The list must describe each unit of property with historical information, arriving at a remainder which is the amount to be amortized over a term of years. The program must be approved by the Bureau of Internal Revenue. Proportionate amounts to be so amortized become a charge to operating expenses each year. The recovery is through reduction of taxes by reason of the increased charges to operating expenses on this account.

The members of the Committee on Records and Accounts of the American Railway Engineering Association are familiar with the studies necessary for the development of depreciation bases with their numerous classifications, and of service lives of the various elements which go to make up the depreciation base. They understand this subject well and know that the amounts so determined for annual depreciation may sometimes be inadequate to permit a complete return of the capital sum to be recovered. This subject is not so well understood by others of us.

The development of a program of obsolescence becomes a duty of the engineering department through its valuation section, and of the accounting department. Lists are first prepared by line-of-road officers. Each listed item must be worked out so as to show its location, description, when built, A.F.E. (authority for expenditure), value, salvage, depreciation already taken, and last the value to be amortized. After its preparation, the program will be in the hands of the accounting and law departments, with such advice and help as the engineering department may then supply. The report form used by the Southern is reproduced herewith.

Extraordinary Obsolescence

Bulletin F, page 3, is quite clear, and under it the taxpayer (the railroad in this case) applies for permission for accelerated amortization of the unrecovered value of assets found to be subject to "extraordinary obsolescence."

"Extraordinary obsolescence" is something that can be anticipated. It is applicable to assets made obsolete by the changeover from steam to diesel power. A time is reached when it can be definitely predicted that the use of assets such as shop buildings, coal and water facilities will be discontinued at a certain future time. It

SOUTHERN RAILWAY SYSTEM

REPORT OF PROPERTY SUBJECT TO EXTRAORDINARY OBSOLESCENCE

PROGRAM NO._____
SHEET____ OF ____
FILE_____
DIVISION_____

CARRIER:_____

	AMORT. PERIOD	EFFECTIVE YEAR	I.C.C. ACCT.	VAL. SECT.	LOCATION	STRUCT. NO.	DESCRIPTION	BUILT	A.F.E.	C.R.	VALUE: FED. INV.	VALUE: V.D. 3	ALLOWABLE ENGINEERING	TOTAL VALUE	GROSS SALVAGE		G.I.R. DEPRECIATION: PAST	G.I.R. DEPRECIATION: CURRENT	VALUE TO BE AMORTIZED

RECOMMENDED:

_____
GENERAL MANAGER.

APPROVED:

_____

CERTIFICATION:

I, J. B. AKERS, CHIEF ENGINEER OF THE SOUTHERN RAILWAY SYSTEM, CERTIFY THAT THIS STATEMENT IS BASED ON INFORMED OPINION AS TO THE PRESENT CONDITIONS AND FUTURE DEVELOPMENTS, AND ACCURATELY PRESENTS THE FACTS CONTRIBUTING TO EXTRAORDINARY OBSOLESCENCE.

_____
CHIEF ENGINEER.

Reproduction of the form used on the Southern in developing programs of obsolescence resulting from dieselization

is important that "extraordinary obsolescence" be detected as far in advance as possible.

In a dieselization program we know that obsolescence is coming. We must determine, and prove, the date on which it begins and estimate the date on which it is to become complete. Sometimes there is a policy adopted by management, and a statement made which will prove these dates.

It is well to recognize the two types of claims for losses due to abandonment of assets prior to the end of normal life. The normal or useful life is that term during which physical exhaustion takes place through wear and tear.

Expressed simply:

"Extraordinary obsolescence" is predictable and should be amortized.

"Loss of useful value" is not predictable, and the loss on the unrecovered value is to be taken in the year of retirement.

"Extraordinary obsolescence" usually occurs because of an improvement in the art, change in economic conditions, or a great change in methods of operation. When diesel power is substituted for steam power, the steam power and related facilities are subject to "extraordinary obsolescence." A spur track or branch line of railroad may be a subject for "extraordinary obsolescence" if it was constructed to serve an industry of known length of operation. It follows some unusually significant change in operation such as the change from steam to diesel power. The taxpayer is required to anticipate the retirement and to spread the unrecovered cost over the remaining years of usefulness of the asset.

The program as it relates to diesel operation will anticipate the extent to which the program is to be carried. There will be no obsolescence where both steam and diesel road power are operated, nor will full operating economy result since facilities and labor force must be available for service and repair of both types of power. Each railroad will determine how it will proceed, but we might review the method which seems to obtain on most lines. The method of changeover will determine the extent of coverage of property for obsolescence, and it will be the purpose to make it as complete as possible.

Method of Dieselization

In its earlier days the changeover from steam to diesel applied to long passenger runs, and next to long freight runs. As the number of diesels increases we find that the next step is dieselization by territories or areas. The economies are not fully realized as long as both steam and diesel power are maintained in an area. It often occurs that a comparatively few diesels replacing steam power in an area will permit the abandonment and complete removal of some existing shops, enginehouses, and fuel and water stations. Such areas are chosen having in mind distance from main shops, haul on coal, and whether or not the area is likely to be traversed by steam locomotives en route to some other division which may still be steam operated.

It has been considered good practice under steam operation to have the main shops of a system at one or more central points. The road diesel is a systemwide engine, and capable of long runs requiring no coal and little water. The requirement for central shops may be entirely different than what it was for steam power. A careful study must then be made to determine where shop facilities should be located, and where to place servicing facilities. Some shops will probably be wiped out entirely. We have found this to be true in our dieselization program and have completely abandoned the locomotive and machine shops at several locations, and others will follow. Wayside water stations and coaling stations have been removed on a considerable mileage.

As the larger railroads approach full dieselization, it will usually be found that there is a surplus of locomotive shop space. Indications are that the floor area required for diesel power will be much less than was required for steam. For instance, boiler shops, foundries, and tender shops do not have a place in the diesel program. Space in erecting shops will be in surplus. The machines required for diesel maintenance are different from those required for steam. In all of these categories, there will be large values in buildings, machinery and tracks that will find their way into the program of "extraordinary obsolescence."

The facilities required for fueling and servicing are entirely different. Steam power will require either coal or oil for fuel, water, and sand, and provision must be made for cleaning fires and disposing of cinders. The diesel requires a different kind of oil and moderate amounts of water. If both steam and diesel power are in use we must, of course, have facilities for servicing both types. The economy of the changeover is not complete as long as all of these varied facilities are maintained. It will surely be the policy, for reasons of economy, to remove the facilities for steam power as early as that can be done. But this temporary arrangement of dual operation does not remove the obsolescence blight from the steam facilities. They will eventually go. But for reasons of economy, and problems of finance and supply, we are compelled to operate these obsolete facilities.

Subject to Careful Analysis

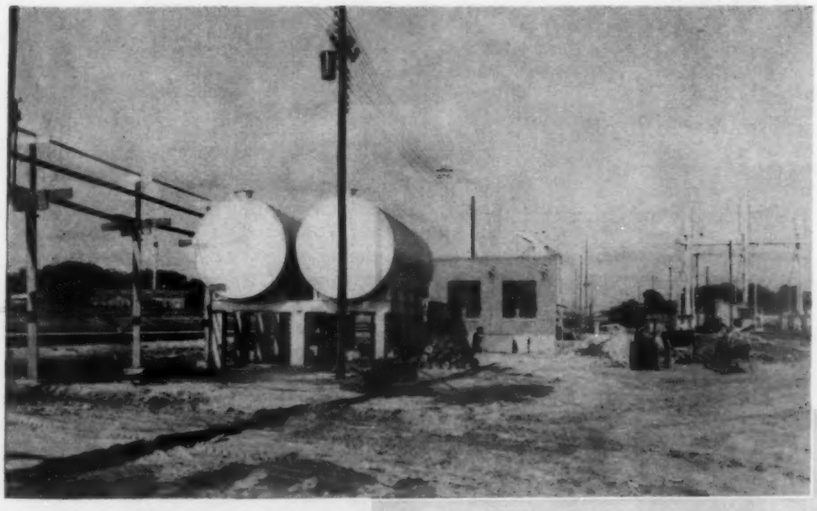
The working out of a dieselization program is not a simple matter, but at the same time is subject to careful analysis and planning. Full dieselization is not realized all at once because the great cost of the equipment must be spread over several years. It is to be expected, therefore, that some lines will be maintained for several years with provision for the operation of both steam and diesel power.

Progress toward full dieselization has been very much of a problem on the Southern. We have several lines now fully dieselized, and have removed the obsolete equipment and buildings, including wayside fuel and water stations. When fully dieselized, additional power must be made available should business increase on the line or in the area. This will be done by drawing diesel power from other lines which have both types of power operating. In other words, there must be a reservoir of diesel power, or what we might call an "expansion tank," from which diesel power may be drawn when needed. On such lines steam power will be restored to service to replace diesels transferred. This will be done as requirements and business conditions dictate. On the Southern system the lines from Washington, D. C., to Atlanta, Ga., and from Cincinnati, Ohio, to Chattanooga, Tenn., will act as "reservoirs of diesels" in this manner. In these times of heavier business on account of the prospect of war, there will be a wider use of steam power than was thought would be the case a couple of years ago. Such an arrangement must remain in effect until there is sufficient diesel power to meet any contingencies that may arise.

A workable plan to meet all contingencies can be reached only through exhaustive study and analysis of conditions present and future. The plan finally adopted

must provide for the continuance of properly located shop facilities for the repair and servicing of steam power where it will continue in service; and new facilities for diesels in the territory they will serve. With 100 per cent dieselization the shops and enginehouses are fewer, and more compact. They are cleaner and usually better, and must be designed for handling precision motive power of great value. Some of the smaller railroads send the entire diesel locomotive back to the builder for general overhaul, or for heavy repairs after accidents. This is a practice which may grow if the builder has a plant not too distant.

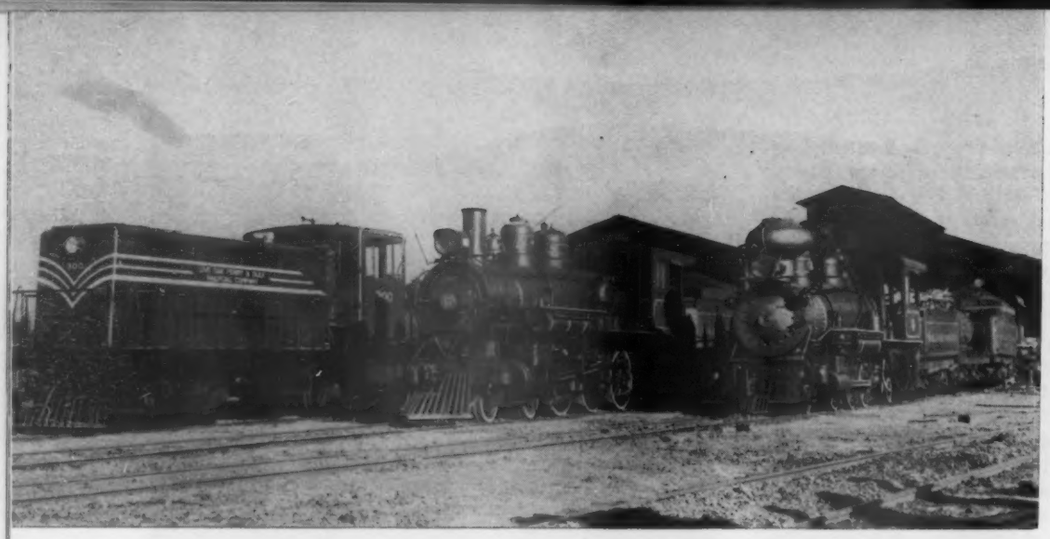
The opportunity afforded under Bulletin F is a real one. Through it, the railways will have permission to use a substantial credit which is of prime importance when depreciable property is being considered. When buildings are removed, their values will necessarily have to be deducted from the depreciation base and there would be no more of what we term "ordinary depreciation" year by year. Bulletin F gives us an opportunity to include all such fixed property under a program, get it approved, and make claim for the remainder of its undepreciated value.



Above—In a dieselization program large investments have to be made in fueling facilities which are entirely different in design from those required for steam power

Above—Facilities for storing fuel oil for diesel locomotives have no similarity to the coaling stations required for steam power

Right—Several lines on the Southern are now fully dieselized. This diesel repair shop with washing platform is at this road's Alexandria, Va., terminal

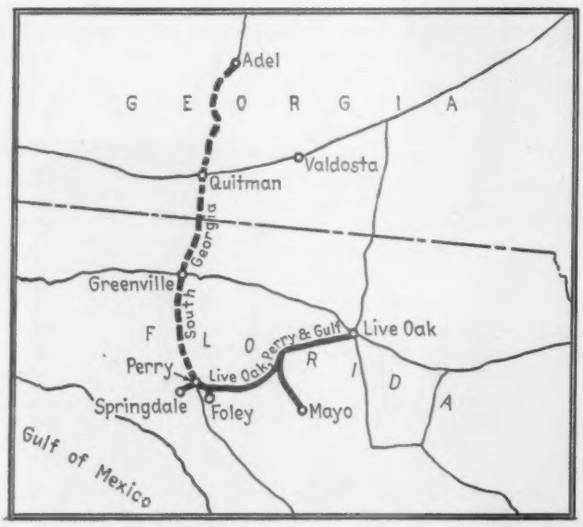


LEFT—Three stages of motive power development on the Live Oak, Perry & Gulf

RIGHT—Timber traffic is the backbone of this road's revenue freight business

Diesel Road-Switchers Trim Short Line's Costs

The Live Oak, Perry & Gulf and the associated South Georgia find diesel power an efficient and flexible operating tool



In the half century of their existence, the Live Oak, Perry & Gulf and its operating affiliate, the South Georgia, have used three varied types of motive power. Both roads were built as logging railways to tap the timber resources of southern Georgia and northern Florida and, like all such railways in the southern forests, began operations with wood-burning locomotives, equipped with the characteristic "blunderbuss" stacks.

Wood later became too expensive to use as fuel and coal-burning locomotives were acquired. Then, in 1946, both roads changed over to diesel power, purchasing 70-ton, 600-hp. road-switchers. Each change in power was reflected favorably on the operating statement, particularly the changeover from coal-burning steam to diesel. In 1950, for example, the monthly fuel costs for handling a consistently larger amount of traffic averaged approximately $550, as compared with $2,500 for the best years of steam operation.

Since locomotive maintenance for both roads was handled in the machine shops of the Brooks-Scanlon Lumber Company at Foley, Fla., it was not possible to make savings by closing down steam repair facilities. However, other advantages of the diesels, according to the road's management, are the elimination of coal chutes and of pumping station costs; less wear and tear on the track and the wooden trestles; and better operations because of the diesel's greater flexibility. Still another advantage in the forested territory is the reduction of fire hazard through diesel operation. This is always important, but it was particularly so in 1950, a year of less than normal rainfall in these areas. Quicker turnaround of cars, with attendant per diem savings, is another important item.

The Live Oak, Perry & Gulf is one of the fortunate few railroads without bonded indebtedness. "Cash on the barrelhead" has been its slogan for some years past. During the war years, it served the large air base at Perry, Fla., and such revenues as were left after the government had drained off the excess profits tax were largely turned back into improving the property. The railway operates between Live Oak, Fla., and Springdale, 46 miles, with an important two-mile branch to Foley, the headquarters of the large lumber mill. Another branch, 12 miles long, serves the prosperous farming community around Mayo, Fla. Even in 1948, when an unprecedented flood on the Suwanee river forced cessation of operations for nine weeks, the L.O.P. & G. was able to continue its traditional policy of staying out of debt.

The line was originally chartered to operate into St. Marks, Fla., a largely undeveloped but potentially valuable port on the Gulf of Mexico, 35 miles west of Perry and directly south of Tallahassee. At its greatest length, the road extended to within 15 miles of this port, but, as the timber was cut out, authority was received to abandon the line west of Springdale. This roadbed could be used again, if a reforestation program, undertaken in the area some years ago, produces a supply of second-growth timber sufficient to justify resuming logging operations. The territory between Perry and St. Marks is without paved highways and is one of the most sparsely inhabited and little-traveled territories east of the Mississippi river.

In view of the cheapness and availability of timber when the line was built, wooden trestles formerly abounded. It was much more economical to build such trestles than to construct earth fills. However, since World War II, 35 such trestles have been replaced by fills and culverts. The longest wooden trestle, 2,350 feet, spans the Suwanee river and is 40 feet above the normal water level, but, during the 1948 flood, water rose to a height of ten feet above the top of the rails on this trestle, which was saved by holding it down with 26 loaded gondolas. The structure contains some of the original first-growth pine of which it was built and which still shows no signs of decay.

This trestle is approximately midway between Live Oak and Perry. To the east, the ground over which the track is laid has a firm clay foundation, but the west end of the railway traverses swampy and sandy territory. The line was laid with 60-lb. rail, which is still in good condition on the east end, but which, since the war, has been replaced with 90-lb. rail on the west end, for a distance of 25 miles.

The South Georgia is 76 miles long, extending from Adel, Ga., to Springdale, Fla. In 1946, it was about to be abandoned, but financing was found, a diesel unit was purchased, and operations were put under the direction of the president and general manager of the L.O.P. & G., although, except for coming under the same operating head, the S.G. remains a completely separate company. The South Georgia was also built as a logging line, but when the virgin timber was cut out and the effects of truck competition became more and more keenly felt its position grew steadily worse. At present, its financial position is sound and, further, a program is under way to eliminate many of the wooden trestles which also characterize this line, there being 89 such structures in 76 miles.

The L.O.P. & G. connects with the Seaboard Air Line and the Atlantic Coast Line at Live Oak and with the A.C.L. at Perry. The S.G. connects with the A.C.L. at Perry and, of course, with the L.O.P. & G. at the same point. It also connects with the Seaboard at Greenville, Fla.; the A.C.L. at Quitman, Ga.; and with the Southern and the Georgia & Florida at Adel, Ga., its northern terminus.

Both lines handle similar traffic, with forest products still supplying the bulk of the tonnage. These include logs, pulpwood and stumps, as well as finished lumber. Important tobacco markets are also served by both railways; the L.O.P. & G. owns the land on which ten tobacco warehouses have been constructed at Live Oak, under a lease arrangement. It also has other valuable industrial property at that point, part of which is leased to a creosoting plant and to a pole plant. Both lines also handle several hundred carloads of watermelons each season from their respective producing areas.

The L.O.P. & G. serves several limestone rock quarries, or "mines" as they are locally termed, one of which shipped over 600 cars of road-building materials during 1950. The management is keenly aware of the possibilities and desirability of locating new industries along the line and President J. H. Kansinger has taken personal charge of industrial development.

Three General Electric 70-ton, 600-hp. diesel road-switchers were purchased in 1945; two for the L.O.P. & G. and one for the S.G. In view of the shortness of the lines, no unusual monthly mileage records are possible, but all three units are utilized to the fullest extent which circumstances permit. One diesel makes a round trip daily between Live Oak and Perry and the other makes a similar trip, with a round trip over the Mayo branch en route. The daily road mileages of these two locomotives are 94 and 118 miles respectively and they perform all road and switching service, handling an average of 1,000 cars monthly.

The diesel on the S.G. leaves Quitman for Perry in the morning, doubles back through Quitman to Adel and returns from there to Quitman; in other words, a round trip over the railway, for a total of 152 miles daily.

Since interchange equipment owned by the two roads consists only of 20 L.O.P. & G. 100,000-lb. capacity flat cars and one S.G. auto box car, the problem of per diem payments has, at times in the past, become acute. The intensive use of diesels, together with the improvement of the physical property, has resulted in material savings in per diem, because of the faster handling of cars over the road and quicker turn-arounds at destinations.

Hours of train time saved and track capacity increased in territory which handles up to 60 trains daily

Trains save time by making closer meets

Centralized Traffic Control Benefits Canadian National Subdivision

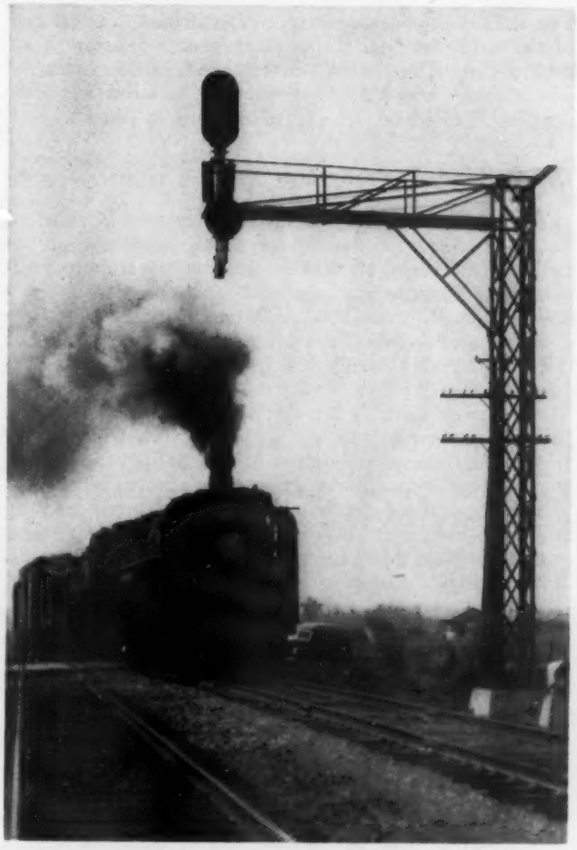
On 117 miles of busy single track between Ste. Rosalie, Que., and West Junction the Canadian National has installed centralized traffic control, as a means of increasing track capacity and reducing train time. This project is on the route eastward from Montreal, Que., to Halifax, N.S. Ste. Rosalie, the west end of this new C.T.C. installation, is 36 miles east of Montreal; and West Junction is the west end of the freight yards just west of Levis, Que., which is on the south side of the St. Lawrence river opposite the city of Quebec.

From Montreal, double track extends south across the St. Lawrence and 36 miles to Ste. Rosalie, at which point one line diverges southeast through Richmond, Que., and Sherbrooke to Portland, Me. From Ste. Rosalie, the Drummondville subdivision, on which the new C.T.C. was installed, extends east to Levis. Branch lines connect with the Drummondville subdivision at St. Leonard Junction, Aston Junction, Villeroy, and Chaudiere (see map). Therefore, in addition to trains which run through on the entire subdivision, some trains operate only part way. For example, two passenger trains each way daily, to and from the Nicolet branch, are operated over that portion of the Drummondville subdivision between St. Leonard Junction and Ste. Rosalie, 45 miles. A mixed train each way daily to and from the Deschaillons branch uses the Drummondville subdivision between Villeroy and Levis, 46 miles.

Schedules include three through passenger trains each way daily, and in busy seasons second sections of these trains are operated. The fast through freight traffic is handled by 8 to 12 through freight trains each direction daily, depending on the volume of traffic. Counting all through trains and branch-line trains, the number of train movements ranges from about 35 to 45 daily in the summer, and from 50 to 60 daily in the winter.

Saves Train Time

On this territory the train movements were previously authorized by timetable and train orders, and there was no automatic signaling in service. About 225 train orders were issued every 24 hours. Train order offices are now maintained only at the junction points with branch lines, no orders now being issued at 11 offices formerly in service for that purpose. Train movements are now authorized by signal indications controlled by the C.T.C.



Cantilever structure avoids moving the siding to place station-leaving signal between main track and siding

system. Previously, freights were required by rule to clear the main track at least 20 minutes ahead of passenger trains. If a passenger train lost time, there was no means of getting out orders in time to advance the freight trains. As a result, they often lost 45 minutes to an hour or more in situations where now, with the C.T.C., they can be kept on the move to make meets on close time.

Eastward passenger train No. 4, for example, is due at Ste. Rosalie at 8:58 p.m., and a second passenger train, No. 60, is due at the same station at 9:28 p.m. On one occasion, there were two sections of eastward fast freight No. 406; one of these sections was ahead of No. 4 and the other was between No. 4 and No. 60. In such a circumstance, under previous train order operation, both freight trains would have been required to wait on sidings until both passenger trains had passed, thus losing an hour or more. However, with C.T.C., the dispatcher could keep these trains moving.

On a recent date, there were several extra trains, so that the dispatcher had five eastbound passenger trains and four eastbound freights to deal with at one time. With the C.T.C., he kept fast through eastbound freight No. 406 on the move ahead of eastbound passenger train No. 4 all the way to St. Leonard, whereas previously, with train orders, the freight would have taken siding and waited. After inspection at St. Leonard, the freight No. 406 was run from there to Val Alain, 40 miles, between the first and second sections of passenger train No. 60. Thus, in this instance, the C.T.C. saved at least two hours for No. 406.

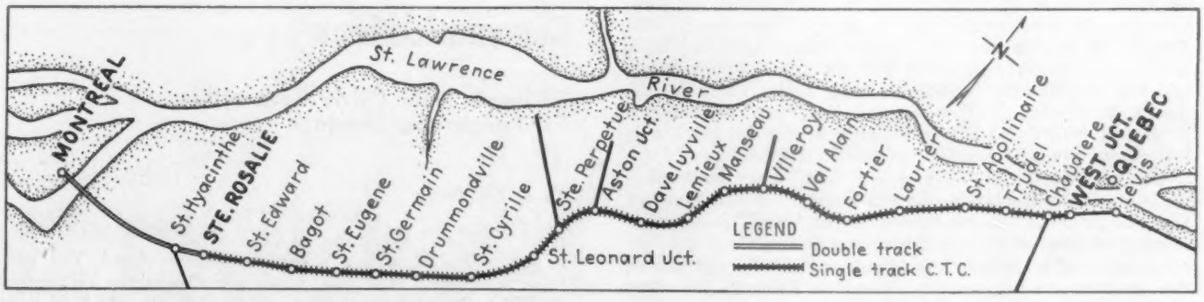
An important advantage with the C.T.C. is that the dispatcher can send out controls on a minute-to-minute basis to direct trains to move, and thus utilize idle track and time that is available. This permits freight trains to be moved out of yards when they are ready to depart, and makes it possible to keep such trains moving for close meets. Fast through freights formerly required 5½ to 6 hours on the 117 miles between Ste. Rosalie and West Junction, and on the average this time has now been reduced to about 3 hours to 3 hours 30 minutes. Recently, for example, this run was made in 2 hours 50 minutes. Extra freight trains, which previously encountered more delays than scheduled trains, now save about 3 hours.

Passenger train schedules have not been shortened. However, if a passenger train departs from a terminal behind schedule, C.T.C. can be used to make up time. For example, at least 10 minutes can be saved by the power switches and C.T.C. when making a meet between two passenger trains. Also, by making closer meets, time is saved, so that the chief dispatcher reports that the C.T.C. can be used to make up 35 to 40 minutes on a passenger train if it is behind schedule when received on the C.T.C. subdivision.

Character of Line

In the 117 miles between Ste. Rosalie and West Junction, the railroad traverses rolling terrain with numerous short grades, but no long, heavy grades. The curvature is relatively light except for a few instances. One curve of 4 deg. is near the east end of Lemieux. The track is well constructed and maintained. The maximum permissible speed for passenger trains operated by Northern type locomotives is 75 m.p.h., and for freight trains operated by Northern and Mikado type locomotives, 60 m.p.h.

At West Junction there was formerly a mechanical interlocking where the west end of the freight yard connects with the main track. This interlocking has been



Map showing junctions and sidings in centralized traffic control territory

replaced by power switch machines and signals which are included in the C.T.C. system. A power switch and signals at the junction at Chaudiere, formerly controlled remotely from West Junction, are now in the C.T.C. At Aston Junction, a mechanical interlocking was replaced by power switch machines and signals in the C.T.C. At Villeroy, the Deschaillons branch connects to the main line at a hand-throw switch, and train movements from the branch to the main line are governed by a dwarf signal controlled by C.T.C.

As a general rule, freight trains are stopped at St. Leonard Junction to permit trainmen to inspect the cars on both sides for the entire length of the train. The layout consists of two sidings, the one on the north being used normally by eastward trains, and the one on the south by westward trains. Spring switches are used at the departure ends of these sidings.

The layout at Drummondville includes two sidings with a power switch at both ends on the siding north of the main track, while the siding on the south has a power switch at the east end and a spring switch at the west end.

Single sidings with power switches at both ends are located at 17 towns as indicated on the map. The C.T.C. also includes a power switch at the east end of the siding at Ste. Rosalie, the west end being in an interlocking. Thus, as a whole, the C.T.C. includes 42 power switches and 5 spring switches, and also 133 high signals, 90 of which are controlled, and 48 dwarfs.

C.T.C. Line Code System

The control machine is in the dispatcher's office at Levis, which is 8.5 miles east of the east end of the C.T.C. at West Junction. The outgoing controls and incoming indications are handled over a two-wire line circuit by Type-K, Size-10, Class-M coding equipment. Carrier operates between the office and a field station at Aston to handle outgoing controls and incoming indications on the territory west from Aston to Ste. Rosalie. The outgoing controls for that section are 13.0 kilocycle and the incoming codes are 17.0 kilocycle. Office facilities include complete equipment for testing and adjusting the line coding and carrier apparatus.

This centralized traffic control was planned and installed by Canadian National signal forces. The signaling equipment for this project was made by the General Railway Signal Company.

New Book...

THE LACKAWANNA STORY, THE FIRST HUNDRED YEARS OF THE DELAWARE, LACKAWANNA AND WESTERN RAILROAD, by Robert J. Casey and W. A. S. Douglas. 223 pages, illustrations. 9¼ in. by 6 in. Bound in cloth. Published by the McGraw-Hill Book Company, New York. $4.00.

The long-felt need for a full length history of the Delaware, Lackawanna & Western should be fully satisfied with publication of this volume by Messrs. Casey and Douglas, whose previous excursion into railroad history was a biography of the Chicago & North Western system. Writing with warmth and insight into the problems of building, maintaining and operating a railroad, the authors have neglected no salient facts in the life of the road with which they deal. The book offers a delightful fusion of broad historical research and consistent readability, a combination not always the result of digging into archives.

The authors, not limiting themselves precisely to the "first hundred years" of the D.L.&W., begin their story in 1662, the year in which dissolute King Charles II of England first gave away the land now comprising the northeastern section of Pennsylvania, the territory in which the Ligett's Gap Railroad, the cornerstone of the present Lackawanna system, was built in 1849-51. The history of this region—and its modes of transportation, from Indian and animal trails through pioneers afoot, on horseback and in wagons—is covered concisely and expertly. After recording these details, all pertinent to the main stream of their narrative, the authors dig into the meat of their study with histories of predecessor railroad companies and the businessmen, promoters, engineers and financiers whose efforts laid the groundwork leading to today's Delaware, Lackawanna & Western. Anthracite and iron, two commodities intricately interwoven into the fabric of the Lackawanna's life story, naturally receive extended attention.

The book ends with "Legend and Fact," a section exploring some of the fascinating human interest stories connected with the railroad. Among these are the "birth" and subsequent activities of Phoebe Snow, the commissioning of an oil painting of a Lackawanna roundhouse by George Inness, the great nineteenth century American painter; the story of the Hoboken ferry; and brief glimpses into places along the line which are connected with American Revolutionary history.

Speaking of Phoebe Snow, the precisionist may wonder if the caption under the photograph of the train bearing that name should give the streamliner's terminals as Buffalo and New York, and the city fathers of Hoboken, N. J., may wonder at the caption locating the road's Hudson river terminal in Jersey City. George Inness's name, incidentally, is consistently misspelled in the text.

Messrs. Casey and Douglas have not neglected humor in their book as, with the indulgence of the Erie (whose centennial *Railway Age* will feature in the May 14 issue), this story will indicate: "One anecdote of Phoebe Snow that has stayed in the memory of railroad men concerns William H. Truesdale, president of the Lackawanna between 1899 and 1925, Frederick D. Underwood, contemporaneous president of the Erie, and Phoebe Smith, a Jamaican-born Negress who acted as a sort of janitress in the Lackawanna executive offices . . . Truesdale and Underwood were close friends and frequently had luncheon together. One day, as they were leaving the Lackawanna offices, they met Phoebe Smith coming in. 'Good morning, Mr. Truesdale,' greeted Phoebe. 'Good morning, Phoebe,' responded Truesdale. 'Good Lord!' said Underwood, 'is that Phoebe Snow?' 'That's her,' agreed Truesdale, 'but she just got off the Erie.'"

Communications . . .

Railroads Held Partly Responsible For Freight Car Shortage

WASHINGTON 5, D. C.

TO THE EDITOR:

Your editorial, captioned "Planners Ignore Shippers' Need for Cars" appearing on page 37 of the March 5 issue of *Railway Age*, strikes a very responsive chord. You perhaps will recall that last June, our Committee on Transportation Instrumentalities and Car Service had a very

interesting séance with the railroad vice-presidents in Chicago, on the subject of cars. We advocated three points: (1) build more cars, (2) repair bad order cars, (3) speed up service. In our presentation, we emphasized that our quickest source of supply could be had through the repairing of the large number of bad order cars *while men and material were available.* Everyone realized that we were living on top of a volcano which might erupt at any moment.

That summer, along came the Korean situation, and all at once there was a mad scramble on the part of everybody for steel, and the carriers were caught woefully short. They could, today, handle a tremendously increased tonnage if cars were available. In this connection you might be interested in noting my Circular 4077 issued March 9, reviewing the present freight car situation, and emphasizing the need on the part of all to save car days by loading heavy and releasing cars as promptly as possible.

You also might be interested in Item 25 of our weekly newsletter, "The Legislator," captioned "Freight Car Crisis Requires 'Tightening of One's Belt Another Notch'." It is an old axiom that hindsight is better than foresight, but nevertheless it is most unfortunate that railroads, a year ago, not only ceased almost entirely the ordering of new cars, but even went so far as to cancel orders already placed for new equipment.

We are told that there is still a large amount of last year's wheat on the ground in the Northwest which must be moved at once, otherwise it will rot. I am told also there is a large amount of freight, particularly steel, on the ground at the plants awaiting cars. The flour mills at Buffalo were forced to close because of lack of cars. I realize that the switchmen's "sick" strike played havoc with the movement of freight and completely dislocated cars, but the early spring should enable the railroads to get out from under and return to normal conditions.

I also appreciated your editorial in the same issue, captioned "Open Freighthouses Deserve Open Industries." I find an increasing number of industries, particularly in certain lines, are operating on a six-day week, and some on seven days. I do not know to what extent industries are refusing to accept l.c.l. shipments on Saturdays. I do know that, in some of the larger cities at least, a lot of receivers have served notice that they will accept l.c.l. freight only on certain days of the week. If freighthouses are congested, then of course that situation should be met squarely, and I believe that receivers would be willing to cooperate wholeheartedly were they apprised of the situation.

The National Industrial Traffic League has been conducting an active campaign for some time urging that all dunnage, packing materials, etc., be removed at the time the car is unloaded, so that it will be in clean condition to be placed for loading by somebody else; otherwise it frequently happens that a two- or three-day delay is encountered where the carrier is required to switch the car to its cleaning tracks. I have always insisted that while there probably is no legal obligation upon the receiver to remove packing material from the car, there is a moral obligation during times of car stress, and that point has been emphasized repeatedly.

I am prompted to make this last remark because of the article appearing on pages 40 and 41 [March 5 *Railway Age*], outlining what my good friend Charles Coyle of Otis Elevator Company is accomplishing along this line.

EDWARD F. LACEY
Executive Secretary
National Industrial Traffic League

[No one would deny, today, that it would have been well for the railroads and the country if the railroads had ordered more freight cars and instituted a larger number of other improvements in the first half of 1950 than they did. Considering their traffic losses and their poor earnings then, however — and the pressure upon them from the financial community to keep their equipment maturities within their charges to depreciation — it would be hard to establish that their inactivity was imprudent in the light of the situation as it was at that time. The only route to assured adequacy of railroad service at all times is the adoption of a realistic national transportation policy which will give the railroads an opportunity to secure the earnings and credit, without which they cannot hope to improve and expand their services as the public welfare requires. If all of us who comprise the general public — including the shipping community — had exerted greater effort than we did in the years immediately after World War II, toward the establishment of a reasonable national policy for transportation, the present difficulties would not have arisen. Until such a policy is made effective, we can have no assurance against the recurrence of these difficulties — or, indeed, against their becoming chronic.—EDITOR]

The Superintendents' Importance

EDDYSTONE, PA.

TO THE EDITOR:

In the March 26, 1951, issue of *Railway Age*, there is a most interesting article "Keystone of the Arch — the Superintendent and His Assistants." While this editorial is directed primarily at railroad men, it most certainly has its lesson for industry generally.

It seems to me that the matter of enlisting our organizations, particularly those in supervision, in our problems through an understanding of the things we are each trying to do is most vital to the preservation of free enterprise in our country. ALL HAIL to you for starting this. I think it should be continued and emphasized.

W. M. SHEEHAN
Vice-president
General Steel Castings Corporation

[It is gratifying to get this approbation of our expression from such a well-informed source. We have been advised, also, that at least one large railroad has called this editorial to the particular attention of each of its superintendents, expressing hearty agreement with the conclusions therein expressed.—EDITOR]

A Wasted Resource

ST. LOUIS 1, MO.

TO THE EDITOR:

A severe shortage of waste paper, especially old corrugated boxes, brown wrapping paper and bags, exists today. Unless the supply of these kraft pulp substitutes is increased, the supply of paperboard will become even more acute.

Old corrugated boxes, kraft papers and bags are the best sources, next to wood pulp, of strong fiber materials needed for the manufacture of paperboard products.

More old corrugated and kraft will be needed for paperboard manufacture during the months ahead. This is reflected in government requirements. However, at the present time only about 20 per cent of the corrugated now manufactured finds its way back as waste paper, as compared to much higher percentages for old newspapers and magazines.

The supply of this vital raw material must be increased. Reports from many sections of the country are that industrial plants and retailers, while pressing for increased packaging supplies on one hand, are destroying the raw material from which this packaging is made.

If we are to meet civilian and war requirements for this packaging, destroying of this essential raw material must stop.

FRANK BLOCK
Midwest Consumers of Waste Paper

GENERAL NEWS

Net Income for 1951 Reaches $53 Million

Net railway operating income is $96.6 million

Class I railroads in the first two months of 1951 had an estimated net income, after interest and rentals, of $53,000,000, compared with $5,000,000 in the corresponding period of 1950, according to the Bureau of Railway Economics of the Association of American Railroads. The two-months' net railway operating income, before interest and rentals, was $96,670,698, compared with $47,656,153.

Estimated results for February showed a deficit of $3,000,000, compared with a deficit of $8,000,000 for February 1950. Net railway operating income for the 1951 month was $18,958,787, while in February, 1950, it was $14,772,248.

The A.A.R said railroad traffic and earnings were adversely affected during the first two months of 1950 by work stoppages in the coal, automobile and certain other industries.

In the 12 months ended with February 1951, the rate of return averaged 4.42 per cent, compared with 2.79 per cent for the 12 months ended with February 1950.

Gross in the first two months of 1951 amounted to $1,564,487,589, compared with $1,241,972,636 in the same period of 1950, an increase of 26 per cent. Operating expenses amounted to $1,255,306,303, compared with $1,047,778,477, an increase of 19.8 per cent.

Interest and Rentals

Twenty-eight Class I roads failed to earn interest and rentals in the first two months of 1951, of which 12 were in the Eastern district, one in the Southern region, and 15 in the Western district.

Class I roads in the Eastern district in the two months of 1951 had an estimated net income of $4,000,000 compared with a deficit of $9,000,000 in the same period of 1950. For the month of February their estimated deficit was $16,000,000 compared with a deficit of $16,000,000 in February, 1950.

Those same roads in the two months had a net railway operating income of $28,794,460 compared with $13,709,911 in the same period of 1950. They experienced a deficit in net railway operating income of $2,884,709 in February compared with a deficit of $3,178,359 in February, 1950.

Gross in the Eastern district in the two months of 1951 totaled $695,917,874, an increase of 28 percent compared with the same period of 1950, while operating expenses totaled $583,168,582, or an increase of 23.1 percent.

Class I roads in the Southern region in the two months had an estimated net income of $18,000,000 compared with $11,000,000 in the same period of 1950. For the month of February they had an estimated net income of $6,000,000 compared with $5,000,000 in February, 1950.

Those same roads in the two months had a net railway operating income of $22,992,145 compared with $18,527,902 in the same period of 1950. Their net railway operating income in February amounted to $9,255,928 compared with $8,597,221 in February, 1950.

Gross in the Southern region in the two months totaled $236,320,977, an increase of 23.4 percent compared with the same period of 1950, while operating expenses totaled $179,498,813, an increase of 19.4 percent.

Class I roads in the Western district in the first two months had an estimated net income of $31,000,000 compared with $3,000,000 in the same period of 1950. For the month of February they had an estimated net income of $7,000,000 compared with $3,000,000 in February, 1950.

Those same roads in the two months had a net railway operating income of $44,884,093 compared with an income of $15,418,340 in the same period of 1950. Their net railway operating income in February amounted to $12,587,568 compared with $9,353,386 in February, 1950.

Gross in the Western district in the first two months of 1951 totaled $632,248,738, an increase of 24.7 percent compared with the same period of 1950, while operating expenses totaled $492,638,908, an increase of 16.2 percent.

CLASS I RAILROADS — UNITED STATES

	Month of February 1951	1950
Total operating revenues	$ 715,758,861	$ 584,927,686
Total operating expenses	610,060,029	501,117,846
Operating ratio — percent	85.23	85.67
Taxes	71,478,680	55,582,342
Net railway operating income (Earnings before charges)	18,958,787	14,772,248
Net income, after charges (estimated)	Def 3,000,000	Def 8,000,000
	Two Months Ended February 28, 1951	
Total operating revenues	1,564,487,539	1,241,972,636
Total operating expenses	1,255,306,303	1,047,778,477
Operating ratio — percent	80.24	84.36
Taxes	180,872,306	119,571,944
Net railway operating income (Earnings before charges)	96,670,698	47,656,153
Net income, after charges (estimated)	53,000,000	5,000,000

2d Quarter Loadings Seen Up 6.5 Per Cent

Shipper boards predict rise in 21 of 32 commodity groups

Freight car loadings in the second quarter of 1951 are expected to be 6.5 per cent above those in the same period of 1950, according to estimates of the 13 regional Shippers Advisory Boards.

On the basis of these estimates, loadings of the 32 principal commodity groups will be 7,993,831 cars in the second quarter of 1951, compared with

In the Week's News . . .

HIGHLIGHTS

DEPARTMENTS

7,507,009 actual loadings for the same commodities in the corresponding period of 1950.

Eleven advisory boards estimate an increase and two estimate a decrease for the second quarter compared with the like 1950 period. An accompanying tabulation shows actual loadings for each district in the second quarter of 1950, estimated loadings for the second quarter of 1951, and the percentage of change.

Board	Actual Loadings Second Quarter 1950	Estimated Loadings Second Quarter 1951	Percent Increase
New England	123,179	131,633	6.9
Atlantic States	764,671	794,153	3.9
Allegheny	988,485	1,063,504	7.6
Ohio Valley	1,005,934	988,283	1.7 dec.
Southeast	942,827	974,938	3.4
Great Lakes	574,862	679,326	18.2
Central Western	218,962	238,740	9.0
Mid-West	877,646	942,909	7.4
Northwest	505,819	626,036	23.8
Trans-Missouri-Kansas	357,505	366,960	2.6
Southwest	491,787	508,440	3.4
Pacific Coast	403,611	401,755	0.5 dec.
Pacific Northwest	251,721	277,154	10.1
TOTAL	7,507,009	7,993,831	6.5

The boards expect an increase in the loading of 21 of the commodity groups and a decrease in 11. Among those showing the greatest increase are: grain, all, 43.2 per cent; machinery and boilers, 21.7 per cent; ore and concentrates, 20.7 per cent; brick and clay products, 13.2 per cent; frozen foods, fruits and vegetables, 13.2 per cent; agricultural implements and vehicles other than automobiles, 11 per cent; chemicals and explosives, 10.3 per cent, and citrus fruits, 10.1 per cent.

Commodities for which decreases are estimated include cotton seed, soybean-vegetable cake and meal, excluding oil, 24.3 per cent; cotton, 13 per cent; potatoes, 12.3 per cent; other fresh vegetables, 11.4 per cent, and hay, straw and alfalfa, 8.8 per cent.

"Make-Work" Rules Must Go, Senator Morse Says

Railroad labor unions "shouldn't be allowed to keep rules that really are make-work rules," which "can't be reconciled with efficient operation of the railroads," Senator Morse, Republican of Oregon, said last week. Mr. Morse, who was chairman of a 1941 emergency board which heard a railroad wage case, made his statement at the April 3 session of public hearings which the Senate Committee on Labor and Public Welfare is holding in connection with its investigation of the failure to settle the current wage and rules disputes between the railroads and those of their employees who are represented by the four train and engine service brotherhoods.

The senator's remarks included advice to leaders of the brotherhoods that they should be willing to submit rules issues to arbitration—lest the public get the impression that a sound case for the rules cannot be made. "Labor never gains in the long run by hanging onto rules that are economically unsound," Mr. Morse added.

FOR "EXCELLENCE IN GENERAL MECHANICAL DESIGN of the Chrysler design high speed railroad truck" the Chrysler Corporation's engineering division has been awarded a special certificate by Design News magazine. The award, based on function, appearance and economy, was presented by Stuart P. Hall, editor of the magazine, to James C. Zeder, Chrysler director of engineering and research, and Robert N. Janeway, in charge of dynamics research, who played a major role in development of the truck, a model of which is also shown

Meanwhile, he also asserted that the railroads are "guilty," in the present case, of giving the public the impression that an emergency board report is "something that it isn't," and that the memorandum of agreement for settlement of the disputes, which was signed at the White House on December 21, 1950, was "binding." The agreement was signed by leaders of the four "op" leaders only to be rejected by the general chairman of the brotherhoods.

Since that rejection, the Brotherhood of Railroad Trainmen has taken a strong position in opposition to that provision of the pact which would make Dr. Steelman the arbitrator on the matter of writing the rules changes involved. The committee invited Dr. Steelman to appear at its hearings, but the Presidential assistant declined. He told the committee's counsel, R. R. Murdock, that he could contribute nothing to the inquiry.

President to Nominate

As reported in *Railway Age* of April 2, page 66, Daniel P. Loomis, chairman of the Association of Western Railways, who has been management's spokesman at the hearing, said at the March 28 session that the railroads were "willing to leave the question of who shall be the arbitrator to the President of the United States and will accept anyone named by him." At the March 30 session, B.R.T. President W. P. Kennedy appeared to say that this proposal was "acceptable" to his brotherhood.

Mr. Kennedy went on to note that the only issue then left in the B.R.T. case was that involving a rule covering payments for coupling and uncoupling air hose. The union wants that issue remanded to the individual roads, while the carrier conference committees insist upon a national rule, as recommended by the emergency board which heard the case involving demands of the B.R.T. and Order of Railroad Conductors.

Meanwhile, the committee heard at its March 29 session the assistant secretary of the army, Karl R. Bendetsen, who has been in charge of the railroads since they were seized by the President last August in the face of the B.R.T.-O.R.C. strike threat. Mr. Bendetsen had no prepared statement, his responses to questions from committee members, principally Senator Morse, comprising his testimony.

As to the charge that the seizure has been a "token" seizure which left railroad management undisturbed, Mr. Bendetsen said: "Some people are of the opinion that it is a token seizure. I happen to be, with absolute and complete sincerity, of the firm conviction that it is not. . . These transportation systems are legally in the government's hands and they are under the government's orders."

After Mr. Bendetsen's testimony was concluded, Senator Morse repeated an opinion he had expressed previously —that the effect of the seizure is "to put the White House on the side of the carriers and against the men."

Mr. Bendetsen was followed by the "op" leaders—President Kennedy of the B.R.T., President R. O. Hughes of the O.R.C., President D. B. Robertson

of the Brotherhood of Locomotive Firemen & Enginemen, and Grand Chief Engineer J. P. Shields of the Brotherhood of Locomotive Engineers. They had returned for questioning by committee members, having made their main presentations at the hearing's opening sessions last month.

In discussing the air-hose issue with Mr. Kennedy, Senator Morse advised the B.R.T. leader to agree to arbitrate the issue; and "if you can't prove your case, take your licking."

State Tax on Interstate Trucker Ruled Invalid

The United States Supreme Court has ruled that Connecticut's tax "for the privilege of carrying on or doing business within the state" is invalid in its application to an out-of-state motor carrier engaged exclusively in interstate operations. The court's 6-to-3 decision was embodied in a March 26 opinion announced by Justice Burton in a case involving Connecticut's undertaking to apply the levy to Spector Motor Service, Inc., a Missouri corporation.

The tax is an excise levy on net income attributable to business activities in Connecticut. It was because it was levied "for the privilege of carrying on or doing business" that the court struck it down, finding it to be in violation of the federal constitution's commodities clause. While it insisted that "not a mere matter of labels" was involved, the court's opinion nevertheless included discussion indicating that a tax of different incidence, though like amount, might validly be levied against an out-of-state trucker.

"The incidence of the tax provides the answer," the opinion said. "The courts of Connecticut have held that the tax before us attaches solely to the franchise of [Spector] to do interstate business. The state is not precluded from imposing taxes upon other activities or aspects of this business which, unlike the privilege of doing interstate business, are subject to the sovereign power of the state. Those taxes may be imposed although their payment may come out of funds derived from . . . interstate business, provided the taxes are so imposed that their burden will be reasonably related to the powers of the state and nondiscriminatory."

Also, the court advised that its conclusion "is not in conflict with the principle that, where a taxpayer is engaged both in intrastate and interstate commerce, a state may tax the privilege of carrying on intrastate business and, within reasonable limits, may compute the amount of charge by applying the tax rate to a fair proportion of the taxpayer's business done within the state, including both interstate and intrastate."

The dissenting opinion was by Justice Clark, with whom Justices Black and Douglass agreed. They thought the majority had been preoccupied with a "matter of labels." The Connecticut tax, Justice Clark said, "meets every practical test of fairness and property enunciated in cases upholding privilege taxes on corporations doing a mixed intrastate and interstate business. These cases should govern here, for there is no apparent difference between an 'exclusively interstate' business and a 'mixed' business which would warrant different constitutional regard."

Justice Clark also noted that it had taken "eight years and eight courts to bring this battered litigation to an end," and that the taxes involved "go back 13 years." The dissenting opinion then went on to indicate the prospective effect of the majority ruling on tax revenues of Connecticut and other states.

"It is," it said, "no answer to Connecticut and some 30 other states who have similar tax measures that they can now collect the same revenues by enacting laws more felicitously drafted. Because of its failure to use the right tag, Connecticut cannot collect from Spector for the years 1937 to date, and it and other states may well have past collections taken away and turned into taxpayer bonanzas by suits for refund . . ."

Car Surpluses and Shortages

Average daily freight car surpluses and shortages for the week ended March 31 were announced by the Association of American Railroads on April 5 as follows:

	Surplus	Shortage
Plain Box	0	18,150
Auto Box	10	177
Total Box	10	18,327
Gondola	40	3,295
Hopper	1,740	914
Covered Hopper	0	19
Stock	660	71
Flat	0	1,127
Refrigerator	1,978	724
Other	294	7
Total	4,722	24,484

A.F.L. Joins Opposition To Rogers' Reappointment

President William Green of the American Federation of Labor has written the Senate Interstate and Foreign Commerce Committee urging it not to confirm reappointment of Commissioner John L. Rogers to the Interstate Commerce Commission.

The A.F.L. is "strongly opposed" to confirmation, Mr. Green wrote. Mr. Rogers, he contended, " has failed to measure up to the standards required of a member of the I.C.C." As the "dominant force" in trucking regulation, he has shown himself "partial to the least responsible interests" in the trucking industry, Mr. Green said.

Mr. Green's letter was placed in the record at April 3 hearings before the Senate committee. Walter Mason, legislative agent for the A.F.L., also appeared, offering a statement to supplement the letter. The April 3 session was the third day of hearings on Commissioner Rogers' reappointment. Previous sessions were held March 14 and March 28 (See *Railway Age* of March 19, page 73, and April 2, page 65). Senator Johnson, Democrat of Colorado and chairman of the committee, has announced further sessions for April 5 and April 10.

Several representatives of the International Brotherhood of Teamsters, Chauffeurs, Warehousemen & Helpers appeared before the committee April 3 to oppose Mr. Rogers. Their views were generally the same as those expressed at the March 28 hearing by

THE CANADIAN PACIFIC'S new $160,000 station at Farnham, Que., was officially opened on March 8, to replace a building destroyed by fire some 25 months ago. The new brick and reinforced concrete structure has passenger facilities on the main floor, with administrative offices of the Farnham division on the second. Speakers at the dedication ceremonies included G. N. Curley, general manager of the C. P.'s Eastern region, F. A. Pouliot, general superintendent of the Quebec district, and L. R. Bangs, superintendent of the Canadian Pacific's important Farnham division

the union's director of research, Frank Tobin. Mr. Tobin said motor carrier regulation today is at a "deplorably low ebb," and that Commissioner Rogers "is primarily responsible for it."

At one point in the hearing, Senator Johnson turned the discussion to truck weight laws in the states. He placed in the record a letter written March 8 by Defense Transport Administrator James K. Knudson, calling on state governors to help eliminate "unjustifiable highway transport barriers." (See *Railway Age* of March 19, page 71). Senator Johnson said the letter was an invitation to overload trucks in the name of national defense.

Ohio Senate Shelves Conveyor Belt Bill

The Rules Committee of the Ohio State Senate has voted — by a reported margin of 5 to 2 — to postpone further consideration of the belt conveyor bill (S.B. 51) under which Riverlake Conveyor Belt Lines, Inc., is seeking to gain the right of eminent domain and approval to operate as a common carrier within the state of Ohio.

The committee's action was said to have been a surprise to most observers, as was the earlier move of the Senate Judiciary Committee in taking the bill out of that committee and onto the floor of the Senate with recommendation of approval. The new action of the Rules Committee leaves the bill "still alive, but not breathing" — as one observer put it.

It will apparently now take a "miracle" to get approval of the bill's twin (H. B. 149) still pending before the state's House of Representatives. Proponents in the lower house have expressed the hope that floor hearings on the bill can begin early in April, but even if it passes the House it would eventually have to clear the Senate's Rules Committee which has already pigeonholed the Senate bill.

T.-M.-K. Board Asks June Report on L.C.L. Agency

Railroads within the territory of the Trans-Missouri-Kansas Shippers Board have been asked to submit a report at the June meeting of the board regarding the progress being made on their study of the "single l.c.l. Agency" proposal which the board advanced last fall. (*Railway Age*, Sept. 9, 1950, page 71, Oct. 7, page 47, and Dec. 2, page 63.) This information was announced by L.C.L. Committee Chairman F. W. Monahan at the 89th regular meeting of the board at St. Louis, Mo., on March 22.

In his report, Mr. Monahan also expressed the board's appreciation to the carriers (particularly to the Missouri Pacific) for, "recent improvements in l.c.l. service and issuance of the route directory or car guide previously requested by the committee."

A total of 301 persons attended the joint luncheon session with the St. Louis Traffic Club to hear George C. Smith, president of the St. Louis Chamber of Commerce, speak on "Cooperation in Transportation."

Complaint Against S.P. Car Service Dismissed

Division 3 of the Interstate Commerce Commission has dismissed a complaint whereby a shipper sought to collect reparations from the Southern Pacific to cover alleged losses incurred as a result of that road's failure to furnish cars during a 1947 period of car shortage. The complainant was Martin Brothers Box Company, operator of a mill at Oakland, Ore., and the case was docketed as No. 29852.

The division's finding, as summarized in the report's headnotes, was that the S.P. was "not shown to have engaged during the period January 1 to September 30, 1947, inclusive, in any unreasonable or otherwise unlawful practice in furnishing or not furnishing cars to complainant . . . or to have subjected complainant to undue prejudices."

Chairman A. H. Gass of the Car Service Division, Association of American Railroads, sent copies of the decision to transportation officers of A.A.R. member roads. "The case," Mr. Gass said, "is of general interest because it is the latest commission decision on the subject of car shortage."

I.C.C. Seeks Locomotive Inspectors

Announcement No. 284, issued March 27, by the U. S. Civil Service Commission, Washington 25, D. C., gives the locations of positions, a description of the work, an outline of the personal and physical requirements, and other general information needed by applicants to qualify for examination for inspector of locomotives for duty with the Interstate Commerce Commission. The positions are rated at $5,400 a year (Grade GS-11).

Application Form 5000-AB may be obtained from any first- or second-class post office, except in cities where a United States Civil Service regional office is located; from the Civil Service Commission at Washington, and in the Panama Canal Zone from the Secretary, Board of United States Civil Service Examiners, Balboa Heights, C. Z. No closing date has been set.

Mitchell Proposes New Scale of Coach-Seat Charges

Interstate Commerce Commissioner Richard F. Mitchell has submitted to the commission a proposed report recommending that 15 eastern and southern roads be required to revise their charges for reserved coach seats. The report is in the No. 30171 proceeding which the commission instituted in Febuary, 1949, to investigate charges that had been established the first of that month.

The revised scale proposed by Commissioner Mitchell would put the charges on a uniform basis. His recommendation is that the commission find the charges unreasonable "to the extent that they exceed, or may exceed, 50 cents for distances from one to 200 miles and $1 for distances over 200 miles."

Under present scales, the charges vary in amount as well as the basis on which they are prescribed, although the maximum is $1. "No evidence has been adduced as to why these charges should not be uniform," Commissioner Mitchell said.

Loading Orders Planned, But They'll Be Tailored

Additional heavy-loading orders applying to specific commodities, like the outstanding grain-loading order, "can be expected," but the Defense Transport Administration plans no loading orders of general application such as were issued by the former Office of Defense Transportation. This was revealed by D.T.A. Administrator James K. Knudson in an April 2 address before the Washington Chapter of the National Defense Transportation Association.

The outstanding grain-loading order is Service Order No. 874, issued by the Interstate Commerce Commission upon recommendation of D.T.A. (see *Railway Age* of March 5, page 74). The former O.D.T.'s heavy-loading order which applied to carload traffic generally was General Order ODT 18.

In rejecting the latter approach to the present situation, Mr. Knudson said the matter would be handled this time in piecemeal fashion, and the limited heavy-loading orders thus issued would be rescinded when no longer needed. He pointed out that the grain-loading order was issued after studies indicated shipments of that commodity were being loaded "con-

FARICY OUTLINES A.A.R. FUNCTIONS IN ADDRESS

William T. Faricy, president of the Association of American Railroads, on March 30 addressed a dinner of the Newcomen Society at the Mayflower Hotel in Washington, D. C., his subject being "The A.A.R.—The Story Behind the Symbol." The address presented a survey of the history of the principal organizations which have become component parts of the A.A.R.—and outlined succinctly the present organization and functions of the various divisions and sections of the A.A.R. as now constituted. The address has been published as a 32-page pamphlet by the Newcomen Society and will receive wide distribution by the A.A.R.

siderably below the carrying capacity of the cars used."

"Similar studies with respect to other commodities are under way and whenever these reveal opportunities for obtaining greater utilization of freight car capacity and space, heavy loading orders can be expected," Mr. Knudson added.

Earlier in his address he had discussed the current car-shortage problem, and D.T.A.'s recommendations for construction of new cars. In the latter connection, Mr. Knudson expressed his confidence that a production rate, "of 10,000 cars per month, or better, will be attained very soon."

The D.T.A. administrator also urged that the country's "more than eight million motor trucks" be permitted "to utilize their full capacities and realize their full traffic potential within limitations of healthy highway usage." On that score, Mr. Knudson referred to his recent letter calling upon state governors to cooperate with him in bringing about elimination of "unjustifiable" size and weight restrictions on trucks. And he went on to suggest that sufficient materials be made available for highway work to the end that necessary repairs would not be neglected.

In closing Mr. Knudson suggested that members of the Defense Transportation Association could serve at this time "in the field of public relations," by "keeping a high sense of urgency alive." He added that the association's members could also serve by using their "good offices" to eliminate "feuds" between different agencies of transportation.

Post Office Announces New Mail Truck Routes

First transfer of short-haul mail from rail to truck has been announced by the Post Office Department. Covering four routes in New England, the transfers will save up to $120,000 a year, according to the department.

Announcement of this first diversion was made at close of a week-long meeting in Washington, D. C., between the department's top officials and the 15 general superintendents. John M. Redding, assistant postmaster general in charge of transportation, said the department now has information on mail flow in 172 terminal areas, and more truck routes will be opened up as rapidly as possible.

The four present routes are: Springfield, Mass., to Waterbury, Conn.; Boston, Mass., to Lynn and Salem; Boston to Portland, Me., and Stamford, Conn., to New Canaan.

Members Named to New Transport Advisory Group

Members of the new Committee on Defense Transportation and Storage have been named by those agencies authorized representation on the committee. Delos W. Rentzel, whose nomination as Under Secretary of Commerce for Transportation is pending in the Senate, will serve as chairman of the committee.

Other members of the group, which will serve in an advisory capacity to Defense Mobilizer Charles E. Wilson, are: Walter A. Radius, director of Office of Transport and Communications Policy, State Department; Vice Admiral Merlin O'Neill, commandant of the Coast Guard, Treasury; Edward G. Plowman, special consultant on military traffic, Defense; Bruce K. Brown, deputy petroleum administrator, Interior; Elmer F. Kruse, assistant administrator for commodity operations in Production and Marketing Administration, Agriculture; Edwin T. Gibson, deputy administrator for staff services, Defense Production Administration; James K. Knudson, administrator, Defense Transport Administration, and Vice Admiral Edward L. Cochrane, maritime administrator, Commerce Department. Two alternate members were named for the Commerce Department. These are Donald W. Nyrop, whose nomination to the Civil Aeronautics Board is pending in the Senate, and Thomas H. MacDonald, administrator of the Bureau of Public Roads.

Freight Car Loadings

Loadings of revenue freight in the week ended March 21 totaled 755,435 cars, the Association of American Railroads announced on April 5. This was an increase of 6,631 cars, or 0.9 per cent, compared with the previous week; an increase of 35,031 cars, or 4.9 per cent, compared with the corresponding week last year; and an increase of 29,812 cars, or 4.1 per cent, compared with the equivalent 1949 week.

Loadings of revenue freight for the week ended March 24 totaled 748,804 cars; the summary for that week, as compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, March 24

District	1951	1950	1949
Eastern	138,438	134,530	115,441
Allegheny	160,108	142,822	123,450
Pocahontas	59,504	66,477	19,353
Southern	133,469	130,861	106,154
Northwestern	75,207	74,435	77,836
Central Western	120,500	109,791	100,205
Southwestern	61,578	58,343	53,890
Total Western Districts	257,285	242,569	231,931
Total All Roads	748,804	717,259	596,329
Commodities:			
Grain and grain products	45,633	41,465	43,218
Livestock	6,552	7,288	8,270
Coal	137,988	175,874	37,169
Coke	15,702	13,545	12,586
Forest products	46,299	38,918	34,926
Ore	19,283	12,053	17,692
Merchandise l.c.l.	83,503	85,624	95,290
Miscellaneous	393,844	342,492	347,178
March 24	748,804	717,259	596,329
March 17	745,365	725,534	607,922
March 10	749,627	707,911	709,326
March 3	785,867	574,449	705,552
February 24	734,794	546,707	688,128
Cumulative total 12 weeks	8,738,771	7,403,601	8,230,688

In Canada.—Carloadings for the week ended March 24 totaled 67,402 cars, compared with 76,825 cars for the previous week, and 75,852 cars for the corresponding week last year, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
March 24, 1951	67,402	35,649
March 25, 1950	75,852	35,470
Cumulative totals for Canada:		
March 24, 1951	882,719	433,374
March 25, 1950	821,748	349,778

Hollar Slated for Job in Commerce Department

P. A. Hollar is expected to be appointed deputy under secretary of commerce for transportation. The appointment awaits Senate confirmation of Delos W. Rentzel as under secretary for transportation.

Mr. Rentzel, who has been chairman of the Civil Aeronautics Board, was nominated for the under secretaryship by President Truman on March 19. No opposition to confirmation of the appointment was registered when the matter came up for public hearing before the Senate Committee on Interstate and Foreign Commerce on April 4. Mr. Rentzel would succeed Major General Philip B. Fleming, who has been appointed ambassador to Costa Rica.

The deputy under secretaryship for which Mr. Hollar is slated would be a new position. Mr. Hollar, a vice-president of the American Car & Foundry Co., has been consultant to Defense Transport Administrator James K. Knudson since that agency was organized last October. Mr. Hollar served during World War II as director of the former Office of Defense Transportation's Materials and Equipment Division. He is also a former assistant to vice-president, Operations and Maintenance Department, Association of American Railroads.

I.C.C. Orders Grain Rate Increase Delayed

The Interstate Commerce Commission on April 2 directed the railroads to postpone, from April 4 until April 19, the effective date of the Ex Parte 175 increases in line-haul, carload rates on grain, grain products and by-products. The rate increases involved are among those approved by the commission in its March 12 report on the interim-relief phase of the Ex Parte 175 case.

The commission's April 2 directive on the grain rates was embodied in Special Permission 49462. On April 3, the railroads filed Supplement 2 to Tariff X-175, which accomplished the postponement.

In the commission's April 2 notice to the public it was stated that the railroads would be directed to make the increases effective April 19 by means of a two per cent surcharge on freight bills, rather than by direct charges in the existing hundredweight rates. When this issue went to press, the com-

mission had not issued the authority to make this conversion.

The postponement of the effective date of the grain rates was sought in petitions filed by grain interests. The pleas were based on contentions that much grain had remained unmoved because of car shortages, and that the grain thus backed up should not be subject to increased rates. Like pleas were made by potato shippers, but the commission concluded not to postpone the effective date of the increase on potatoes.

Car Builders Assured Of Getting Needed Steel

A group of senators and representatives from four northwestern grain states have been assured that the National Production Authority will allocate steel for new freight cars as fast as car builders can build them.

Meanwhile, the railroads, the Interstate Commerce Commission and the Defense Transport Administration are doing all they can to increase the efficient use of present cars. The number of serviceable cars has been going up each month, and more and more empty cars are being furnished to western roads under quota orders of the Car Service Division, Association of American Railroads.

These points were brought out during an April 3 meeting in which a congressional delegation from Minnesota, Montana, and North and South Dakota met to discuss car shortage problems with representatives of the D.T.A., I.C.C. and A.A.R.

Delos W. Rentzel, newly appointed Under Secretary of Commerce for Transportation and chairman of the Committee on Defense Transportation and Storage, Office of Defense Mobilization, was accompanied to the meeting by Robert Glenn, head of N.P.A.'s Transportation Division. It was Mr. Glenn who told the group that pipelines to car builders are "very nearly filled," and that production of new cars in April is expected to reach 9,000.

Commenting on the freight car building program, Mr. Rentzel said N.P.A. has allocated steel for 9,200 freight cars for June, as well as 850 tank cars. He said car builders have been held up somewhat by shortages of wheels and axles, but added that he is confident new car production will reach 10,050 in June. He also assured the group that N.P.A. is going to do everything "within its capacity" to provide steel for building freight cars.

R. E. Clark, manager of the Closed Car Section of the Car Service Division, told the delegation the railroads are doing everything they can to relieve the car shortages in the northwestern grain states. He cited figures showing recent improvements in the on-line car situation for western roads. C. W. Taylor, head of the I.C.C.'s Bureau of Service, backed him up with other figures on the decrease in blocked elevators in the four-states area since March 1.

Homer C. King, deputy administrator of the D.T.A., praised eastern roads for their cooperation in returning empty cars to the west, frequently at financial loss to themselves. He recalled World War II days when he said roads in the east had to be "prodded and threatened," but said they are now doing "the best job I have seen them do." Both he and Mr. Taylor predicted that 10,000 empties a week would be arriving at western gateways during April.

The congressional delegation raised questions as to whether the western roads, once they received empty cars from the east, were not sending too many of them to the far west for use there. Senator Ecton, Republican of Montana, declared that "train-load after train-load" of empties are going west through his state, while elevators stand "glutted" and wet grain can't be moved.

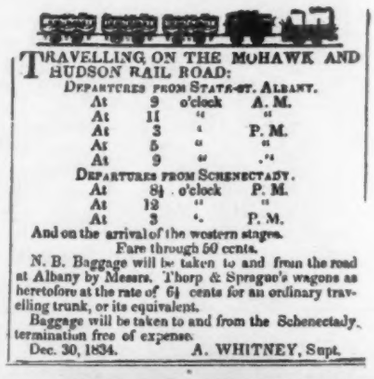
E. L. Peterson of the Minneapolis Traffic Association also complained that "about half" the cars received at western gateways are not fit for use as grain cars. He said the roads could increase the efficient use of cars by speeding up their service, and cited one case where a car loaded with grain took 56 days to go from Minneapolis, Minn., to Chicago. Mr. Rentzel was "rather surprised" at that one, and Mr. Clark said he was sure it was only an isolated case and not a common occurrence.

Senator Thye, Republican of Minnesota, presided at the meeting. In addition to Senator Ecton, others taking part were Senators Mundt, Republican of South Dakota; Murray, Democrat of Montana; and Young, Republican of North Dakota; ;and Congressmen Judd, Republican of Minnesota; D'Ewart, Republican of Montana, and Aandahl, Republican of North Dakota.

Great Lakes Board Asks End To Snub of Transport Needs

A vigorous protest to defense authorities and agencies in the nation's capital to stop ignoring transportation in the national effort at rearmament was sent to Washington by the Great Lakes Regional Advisory Board at its meeting in Buffalo, N. Y. on March 27 and 28.

The board charged that various defense agencies are "robbing Peter to pay Paul" in their allocation of strategic materials. It demanded to know what is gained in allocating materials to manufacture of war goods and building new plants if transportation to carry goods and serve plants was inadequate. The board, terming the effort of the various agencies dangerously misdirected, if not tragic, declared that transportation needs must come first, and that production of essential war goods can be accomplished only if there is adequate transportation. "How much better," it asked, "would be the reapportioning of essential materials to include construction of an adequate supply of freight cars to guarantee transportation of guns, tanks, ammu-



TRAVELLING ON THE MOHAWK AND HUDSON RAIL ROAD:

DEPARTURES FROM STATE-ST. ALBANY.

At	9	o'clock	A. M.
At	11	"	"
At	3	"	P. M.
At	5	"	"
At	9	"	"

DEPARTURES FROM SCHENECTADY.

At	8½	o'clock	P. M.
At	12	"	"
At	3	"	P. M.

And on the arrival of the western stages.

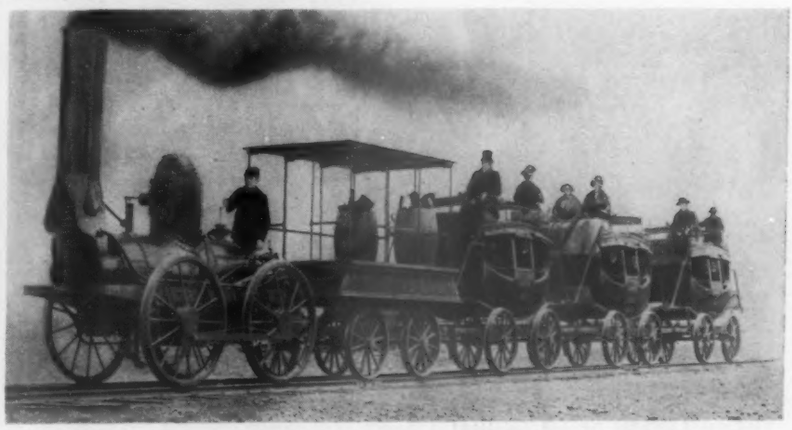
Fare through 50 cents.

N. B. Baggage will be taken to and from the road at Albany by Messrs. Thorp & Sprague's wagons as heretofore at the rate of 6¼ cents for an ordinary travelling trunk, or its equivalent.

Baggage will be taken to and from the Schenectady termination free of expense.

Dec. 30, 1834. A. WHITNEY, Supt.

QUIETLY, AND WITHOUT PARTICULAR CELEBRATION, the New York Central will note on April 17 the 125th anniversary of its origin in 1826. Shown below is the three-ton "DeWitt Clinton," the first locomotive to pull a passenger train in New York state, which inaugurated actual operation of the present New York Central over the Mohawk & Hudson between Albany, N. Y., and Schenectady, in August 1831; at the left is a reproduction of an 1834 newspaper advertisement of the same Mohawk & Hudson



nition and many other items of defense to places where they are needed." Its final demand was that the several defense agencies responsible for materials allocation recognize the vital necessity of increasing the present car building program to a minimum of 12,000 freight cars per month at the earliest possible date.

Andrew H. Brown, the board's legislative committee chairman, urged the board to oppose vigorously Senate Bill S-305, which would create an overall transportation authority within the Executive branch of the government. "If ever a bill was objectionable, this is it," Mr. Brown told the Board. "It is a glaring example of the sort of collectivist threats to our American economy appearing from time to time and which must be combatted by any true believer in private competitive enterprise. Such an establishment would inject into the field of transportation the same fuzzy-minded theoretical type of proposals and controls becoming more and more prevalent in the various departments of our government and would be an additional long step towards substituting the rule of men for law in our business."

Norbert J. Beez, traffic manager, Jennison-Wright Corporation, was named president of the board. Grant Arnold, manager, transportation bureau, Detroit Board of Commerce, was elected vice-president; Karl S. Wright, general traffic manager, Carborundum Company, Niagara Falls, N. Y., chairman of the board's executive committee, and John A. Jacobson, assistant transportation commissioner, Cleveland Chamber of Commerce, was renominated general secretary. The next meeting of the board will be in Cleveland, Ohio, on June 5 and 6.

Canadian Boats Can Carry Lake Ore Again This Year

President Truman has signed recently enacted legislation authorizing vessels of Canadian registry to transport iron ore between United States ports on the Great Lakes during 1951. The legislation was embodied in Senate bill 683, and the authorization is like that which has been granted each year for several years.

D.T.A. Appointments

Elmo E. Ferrari has been appointed director of the Port Utilization Division of the Defense Transport Administration. Mr. Ferrari is on leave of absence from his position as director of the port of Stockton, Cal.

H. K. Osgood, who has been acting director of D.T.A.'s Warehousing and Storage Division, has been appointed director of the division.

Freight Car Program Gets "DO" Rating Identification

The National Production Authority has advised participants in the freight-car construction and repair program that the program now has an identification rating of "DO-38P." That rating will be used in place of certifications on orders for materials covered by the program, but no other change in the allocation set-up is involved.

Pacific Northwest Board Asks Faster RR Schedules

A resolution requesting railroads to accelerate schedules and reduce terminal delays in order to lower delivery and turn-around time was passed at the 79th regional meeting of the Pacific Northwest Advisory Board in Portland, Ore., on March 21-22. The board also reaffirmed its opposition to the St. Lawrence seaway project and opposed enactment of legislation in House Resolution 269, the so-called safety bill. H.R. 269, the board said, "would result in an entirely unjustified invasion by the federal government into the managerial responsibilities of the railroads."

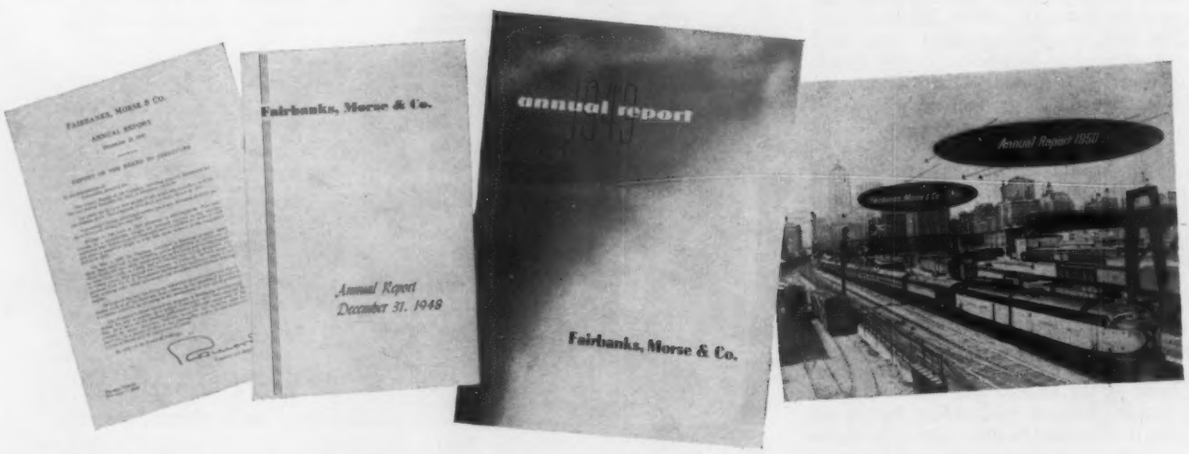
The role of fire prevention in preserving our timber resources was the theme of an address by W. C. Bell, managing director of the Western Retail Lumbermen's Association, at a luncheon sponsored by the board, the Portland Transportation Club, the Portland Industrial Traffic Club, the Junior Traffic Club of Portland and the Women's Transportation & Traffic Club of Portland. R. E. Clark, manager, Closed Car Section, Association of American Railroads, told the meeting that shippers could expect a car shortage throughout 1951, although the Northwest could expect some relief in the near future. Mr. Clark added that 50 per cent of today's car shortage is the result of strikes.

The meeting was attended by 361 persons, including 231 railroad representatives and 106 shippers and receivers. Officers elected for the coming year were: President, R. V. Boyle, traffic manager, Brown & Haley; vice-president, L. R. Pugh, president, St. Maries Lumber Company; and executive secretary, Pete Stallcop, executive secretary, Pacific Northwest Grain Dealers' Association. Avery M. Cloninger, manager, traffic and warehousing, Longview Fiber Company, and former president of the board, was elected chairman of the board's executive committee.

D.T.A. "Barriers" Plea Meant "Civilian" Traffic

The Defense Transport Administration's recent plea for elimination of state "barriers" to trucking applied to "essential civilian movements" only, and there was no intention to interfere with arrangements with respect to military traffic which were made last November by the Department of Defense. This was explained by D.T.A. in a "clarifying statement" issued on March 30.

The original plea on the "barrier"



THE EVOLUTION OF AN ANNUAL REPORT

matter was made by D.T.A. Administrator James K. Knudson in a March 8 letter to state governors. It called for easing size and weight restrictions on trucks. (See *Railway Age* of March 19, page 71.) The Department of Defense's arrangement provides for issuance by states of special loading permits, upon application by representatives of the military services. Truckers are not authorized to apply for such permits.

D.T.A.'s clarifying statements" announced that agency's plan to propose to the states similar arrangements covering "shipments of extraordinary sizes, shapes, etc., movement of which is essential to the civilian economy." D.T.A. would act as "certifying agency" for special permits which would authorize such movements.

The arrangements contemplated, the statement emphasized, "will, under no circumstances, overlap or supersede those arrangements established some time ago by the Secretary of Defense."

OVERSEAS

Britain Cuts Passenger Trains to Save Coal

The British Railway Executive has cut railroad passenger service to effect a weekly saving of 10,000 tons of coal, the railroad's share in a national coal economy program. As a result of complete cancellation of some runs it has been necessary to eliminate dining cars from other trains in order to provide additional seating accommodations.

ORGANIZATIONS

A.R.D.A. Meeting

The American Railway Development Association has announced the program for its annual meeting, to be held at the Chase Hotel, St. Louis, Mo., April 18-20. Following the opening business session, Allan B. Kline, president of the American Farm Bureau Federation, will speak to all sections of the association at a special luncheon session. Dr. Allen A. Stockdale of the National Association of Manufacturers, Chicago, will speak at a "family dinner" on April 19, on "Freedom is Your Business." At the luncheon session on April 20, Richard M. Machol, regional business editor of Business Week, will talk on "Water Supply, Pollution and Conservation." Sectional meetings will be held on April 18 and April 20. Col. Robert S. Henry, vice-president — public relations, of the Association of American Railroads, will discuss "Railroad-Agriculture Relations" before the agricultural section on April 20. Maj.-Gen. Philip B. Fleming, under-secretary of commerce for transportation, Washington, D. C., will describe "Industrial Mobilization for Defense" for the industrial section on April 18. The real estate section has announced plans for six round table discussions on selected tax and real estate matters of current interest.

Wood-Preservers' Annual Meeting at Chicago

The American Wood-Preservers' Association will hold its 47th annual meeting at the Hotel Stevens, Chicago, April 24-26. Reports scheduled for presentation include those of committees on preservatives, treatment methods, recommended practice, utilization and service records and Information and Technical Development. In addition, there will be a number of addresses of direct or indirect interest to railway men.

Features of the program of particular interest to users of treated timber on railways will be papers on "Prevention of Mechanical Wear in Crossties," by A. E. Perlman, general manager, Denver & Rio Grande Western; "What's Ahead for Treated Wood in the Railroad Field," by T. A. Blair, chief engineer, Atchison, Topeka & Santa Fe System; and "History of Union Pacific Timber Treatment," by W. C. Perkins, chief engineer, U. P.

John S. Peters, chief of the Management Branch, Traffic Management Division, General Services Administration, was elected president of the **Traffic Club of Washington, D. C.,** at the annual election meeting held in that city on March 21. F. E. Richter, general agent of the Missouri Pacific, was elected first vice-president, and George H. Cheely of the Department of Agriculture was chosen second vice-president. Relected secretary-treasurer was C. E. Milford of the Finance Office, Department of the Army.

Vice-President and General Traffic Manager T. D. Slattery, of the Associated British & Irish Railways, will voice "Some Thoughts on British and Irish Railways Developments" before the **Chicago Chapter** of the **Railway & Locomotive Historical Society** on April 13. The meeting will be held in the auditorium of the Field building (Room 1552), 120 West Adams street, at 7:30 p.m. The program will also include two motion pictures of railroad interest. The meeting will be open to the public.

The **Mid-West Shippers Advisory Board** will hold its next meeting on April 11 and 12, at the Hotel Morrison, Chicago. The principal luncheon speaker will be John P. Kiley, president of the Chicago, Milwaukee, St. Paul & Pacific, who will speak on "The Human Side of Railroading." The meeting will also feature perfect shipping, and there will be a "Jim Brown Day" in honor of J. L. Brown, retiring general superintendent of transportation of the Milwaukee.

The **Eastern Car Foreman's Association** will hold its next meeting on April 13, at 7:45 p.m., in room 502, Engineering Societies building, 29 West 39th street, New York. A. H. Keys, superintendent, car department, of the Baltimore & Ohio, will speak on "Hot Boxes—Lubrication of Freight and Passenger Cars."

The **Rochester, N. Y., Transportation Club** will hold a loss and damage prevention meeting on April 17 at 7:30 p.m., at Ukrainian Hall, Rochester.

The **Metropolitan Maintenance of Way Club** will hold its annual dinner meeting and election of officers on April 26, in the Skyline room of the Hotel Shelburne, New York. The feature of the meeting will be an open forum on "1951 Work Season—What Problems Does it Present? 40-hr.—Manpower—Supervision," with C. K. Scott, engineer maintenance of way of the Erie, acting as moderator.

Meetings & Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings.

AIR BRAKE ASSOCIATION.—Lawrence Wilcox, Room 827, 80 E. Jackson Blvd., Chicago 4, Ill.

ALLIED RAILWAY SUPPLY ASSOCIATION.—C. F. Weil, American Brake Shoe Company, 6th floor, 109 N. Wabash Ave., Chicago 2, Ill. Exhibit in conjunction with meeting of Coordinated Mechanical Associations, September 17-20, 1951, Sherman Hotel, Chicago, Ill.

AMERICAN ASSOCIATION OF BAGGAGE TRAFFIC MANAGERS.—E. P. Soebbing, 1450 Railway Exchange Bldg., S. Louis 1, Mo. Annual meeting, June 5-7, 1951, Claridge Hotel, Atlantic City, N. J.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—B. D. Branch, C.R.R. of N. J., 143 Liberty St., New York 6, N. Y.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—Miss Elise La Chance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, June 12-14, 1951, Hotel Stevens, Chicago, Ill.

AMERICAN ASSOCIATION OF TRAVELING PASSENGER AGENTS.—C. A. Melin, P. O. Box 5025, Cleveland 1, Ohio. Annual meeting, September 14-15, 1951, Seattle, Wash.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—Miss Elise La Chance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September 17-19, 1951, Hotel Stevens, Chicago, Ill.

AMERICAN RAILWAY CAR INSTITUTE.—W. C. Tabbert, 19 Rector St., New York 6, N. Y.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—F. L. Beardsley, Denver & Rio Grande Western, Denver 2, Colo. Annual meeting, April 18-20, 1951, Chase Hotel, St. Louis, Mo.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in cooperation with the Association of American Railroads, Engineering Division—Neal D. Howard, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 11-13, 1952, Palmer House, Chicago, Ill.

AMERICAN RAILWAY MAGAZINE EDITORS' ASSOCIATION.—W. B. Grumley, Nickel Plate Road Magazine, 432 Terminal Tower, Cleveland 1, O. Annual meeting, November 1-3, 1951, Greenbrier Hotel, White Sulphur Springs, West Va.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—C. E. Huntley, 2000 Massachusetts Ave., N. W., Washington 6, D. C. Annual meeting, October 2-4, 1951, Roosevelt Hotel, New Orleans, La.

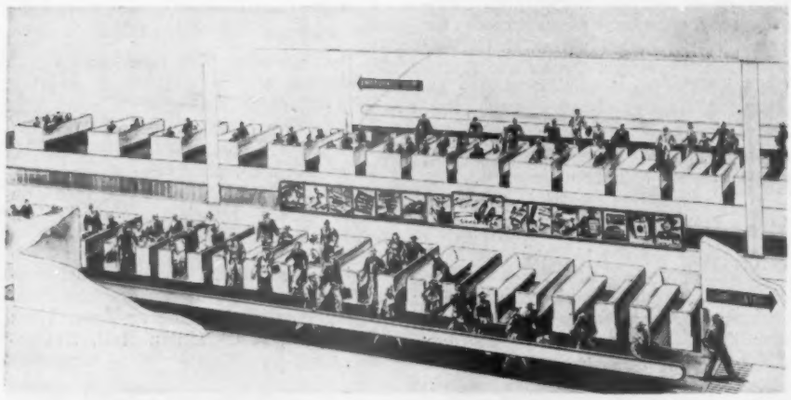
AMERICAN SOCIETY FOR TESTING MATERIALS.—R. J. Painter, Asst. Secretary, 1916 Race St., Philadelphia 3, Pa. Annual meeting, June 18-22, 1951, Chalfonte-Haddon Hall, Atlantic City, N. J.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—C. E. Davies, 29 W. 39th St., New York 18, N. Y. Railroad Division—E. L. Woodward, *Railway Mechanical and Electrical Engineer*, 79 W. Monroe St., Chicago 3, Ill.

AMERICAN WOOD-PRESERVERS' ASSOCIATION.—H. L. Dawson, 839 Seventeenth St., N. W., Washington 6, D. C. Annual meeting, April 24-26, 1951, Hotel Stevens, Chicago, Ill.

ASSOCIATED TRAFFIC CLUBS OF AMERICA.—R. A. Ellison, Cincinnati Chamber of Commerce, 1203 Federal Reserve Bank Bldg., Cincinnati 2, O. Annual meeting, September 24-26, 1951, Olympic Hotel, Seattle, Wash.

ASSOCIATION OF AMERICAN RAILROAD DINING CAR



PLANS FOR A RADICALLY NEW PASSENGER SUBWAY SYSTEM, utilizing the continuous loading principle of the conveyor belt, have been submitted to the New York City Board of Transportation by the Goodyear Tire & Rubber Co. Specifically designed as a low cost and more efficent replacement for the present subway shuttle trains under 42nd street between Times Square and Grand Central Terminal, the passenger conveyor may also prove adaptable, it is believed, to other subway problems. As shown in the artist's conception, above, 10-place passenger cars (with clear plastic tops not shown) would slow down at each terminal to the 1½-m.p.h. speed of loading and unloading belts. Passengers would step out of or into the cars and walk off, or on to, the ends of the belts. To minimize rush-hour confusion, passenger flow would be in two one-way streams, as shown; terminal to terminal travel time on the 42nd Street shuttle is estimated at two minutes

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OFFICERS.—W. F. Ziervogel, 605 S. Ranken Ave., St. Louis 3, Mo. Annual meeting, October 2-4, 1951, Hotel Statler, St. Louis, Mo.

ASSOCIATION OF AMERICAN RAILROADS.—George M. Campbell, Transportation Bldg., Washington 6, D. C.

Operations and Maintenance Department.—J. H. Aydelott, Vice-President, Transportation Bldg., Washington 6, D. C.

Operating-Transportation Division.—L. R. Knott, 59 E. Van Buren St., Chicago 5, Ill.

Operating Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5, Ill.

Transportation Section.— H. A. Eaton, 59 E. Van Buren St., Chicago 5, Ill.

Communications Section.—A. H. Grothmann, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, October 2-4, 1951, Chateau Frontenac, Quebec, Que.

Fire Protection and Insurance Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, October 22-24, 1951, Hotel Statler, Cleveland, O.

Freight Station Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting May 15-17, 1951, Congress Hotel, Chicago, Ill.

Medical and Surgical Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5, Ill.

Protective Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting May 8-10, 1951, St. Francis Hotel, San Francisco, Cal.

Safety Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, June 5-7, 1951, Hotel Statler, Detroit, Mich.

Engineering Division.—Neal D. Howard, 59 E. Van Buren St., Chicago 5, Ill.

Construction and Maintenance Section.—Neal D. Howard, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 11-13, 1952, Palmer House, Chicago, Ill.

Electrical Section.—Neal D. Howard, 59 E. Van Buren St., Chicago 5, Ill.

Signal Section.—R. H. C. Balliet, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, September 10-12, 1951, Edgewater Beach Hotel, Chicago, Ill.

Mechanical Division.—Fred Peronto, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, June 26-28, 1951, Congress Hotel, Chicago, Ill.

Electrical Section.—Fred Peronto, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, September 17-20, 1951, La Salle Hotel, Chicago, Ill.

Purchase and Stores Division.—John L. Timanus, Transportation Bldg., Washington 6, D. C. Annual meeting, June 4-6, 1951, Palmer House, Chicago.

Freight Claim Division.—C. C. Beaupre, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, May 22-24, 1951, St. Francis Hotel, San Francisco, Cal.

Motor Transport Division.—George M. Campbell, Transportation Bldg., Washington 6, D. C.

Car Service Division.—Arthur H. Gass, Chairman, Transportation Bldg., Washington 6, D. C.

Finance, Accounting, Taxation and Valuation Department.— E. H. Bunnell, Vice-President, Transportation Bldg., Washington 6, D. C.

Accounting Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C. Annual meeting, June 11-14, 1951, Hotel Biltmore, New York, N. Y.

Treasury Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C. Annual meeting, October, 1951, Palm Beach, Fla.

Traffic Department.—Walter J. Kelly, Vice-President, Transportation Bldg., Washington 6, D. C.

ASSOCIATION OF INTERSTATE COMMERCE COMMISSION PRACTITIONERS.—Miss Sarah F. McDonough, Executive Secretary 2218 I.C.C. Building, Washington 25, D. C.

ASSOCIATION OF RAILROAD ADVERTISING MANAGERS.—C. J. Hoy, Pennsylvania, Union Station, Chicago, Ill.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—F. L. Johnson, Gulf, Mobile & Ohio R. R., 104 St. Francis St., Mobile 5, Ala. Annual meeting, May 2-4, 1951, Hotel Buena Vista, Biloxi, Miss.

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—L.R. Gurley, Modern Railroads, 201 N. Wells St., Chicago 6, Ill.

CANADIAN RAILWAY CLUB.—C. R. Crook, 4530 Girouard Ave., Apt. 2, Montreal 28, Que. Regular meetings, second Monday of each month, except June, July and August, Mount Royal Hotel, Montreal, Que.

CAR DEPARTMENT ASSOCIATION OF ST. LOUIS.—D. W. Kramer, Relay Depot Mail Room, East St. Louis, Ill. Regular meetings, fourth Tuesday of each month, except June, July and August, Hotel DeSoto, St. Louis, Mo.

CAR DEPARTMENT OFFICERS' ASSOCIATION.—F. H. Stremmel, 6536 Oxford Ave., Chicago 31, Ill. Annual meeting, September 17-19, 1951, Hotel Sherman, Chicago, Ill.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—J. A. Dingess, 8637 South Euclid Ave., Chicago 17, Ill. Regular meetings, second Monday of each month, except June, July and August, LaSalle Hotel, Chicago, Ill.

CENTRAL RAILWAY CLUB OF BUFFALO.—R. E. Mann, Hotel Statler, McKinley Square, Buffalo 5, N. Y. Regular meetings, second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y.

EASTERN ASSOCIATION OF CAR SERVICE OFFICERS.—H. C. Rochester, Canadian National, 891 Notre Dame St. West Montreal 3, Que. Next meeting, April 12, 1951, Benjamin Franklin Hotel, Philadelphia, Pa.

EASTERN CAR FOREMAN'S ASSOCIATION. — W. P. Dizard, 30 Church St., New York 7, N. Y. Regular meetings, second Friday of January, February, March, April, May, October and November, 29 W. 39th St., New York N. Y.

LOCOMOTIVE MAINTENANCE OFFICERS' ASSOCIATION.—C. M. Lipscomb, 1721 Parker St., North Little Rock, Ark. Annual meeting, September 17-19, 1951, Hotel Sherman, Chicago, Ill.

MAINTENANCE OF WAY CLUB OF CHICAGO.—E. C. Patterson, 400 W. Madison St., Chicago 6, Ill. Regular meetings, fourth Monday of each month, October through April, inclusive, except December, when the third Monday, at Eitel's Restaurant, Field Bldg.

MASTER BOILER MAKERS' ASSOCIATION. — A. F. Stiglmeier, 29 Parkwood St., Albany 3, N. Y. Annual meeting, September 17-19, Hotel Sherman, Chicago, Ill.

METROPOLITAN MAINTENANCE OF WAY CLUB.—John S. Vreeland Acting Secretary, Simmons-Boardman Publishing Corp., 30 Church St., New York 7, N. Y. Meets in February, April, October, and December. Next meeting, April 26, 1951, Skyline Room, Hotel Shelburne, New York, N. Y.

MILITARY RAILWAY SERVICE VETERANS.—S. Thomson, 1061 W. Sheridan Road, Chicago 40, Ill. Annual meeting September 22, 1951, Cleveland, O.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—Austin L. Roberts Jr., 7413 New Post Office Bldg., Washington 4, D. C. Annual meeting, October 16-19, 1951, Francis Marion Hotel, Charleston, S. C.

NATIONAL ASSOCIATION OF SHIPPERS' ADVISORY BOARDS.—John N. Lind, National Supply Company, Grant Building, Pittsburgh 30, Pa. Annual meeting, October 9-11, 1951, Hotel Cleveland, Cleveland, O.

NATIONAL DEFENSE TRANSPORTATION ASSOCIATION.—Miss Lois E. Casavant, 930 F. St., N. W., Washington 4, D. C. Annual meeting, October 8-10, 1951, San Antonio, Tex.

NATIONAL INDUSTRIAL TRAFFIC LEAGUE. — Edward F. Lacey, 909 Kass Bldg., Washington 5, D. C. Annual meeting, November 15-16, Palmer House, Chicago, Ill.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—R. B. Fisher, 59 E. Van Buren St., Chicago 5, Ill.

NATIONAL SAFETY COUNCIL, RAILROAD SECTION. — R. C. Sabens, New York, Chicago & St. Louis, Terminal Tower, Cleveland 1, O,

NEW ENGLAND RAILROAD CLUB.—William M. McCombs, 35 Lewis Wharf, Boston 10, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Hotel Vendome, Boston, Mass.

NEW YORK RAILROAD CLUB.—C. T. Stansfield, 30 Church St., New York 7, N. Y. Regular meetings, third Thursday of each month, except June, July, August, September and December, 29 W. 39th St., New York, N. Y.

NORTHWEST CARMEN'S ASSOCIATION.—G. H. Wells, Northern Pacific Railway, St. Paul 1, Minn. Regular meetings, first Monday of each month, except June, July and August, Midway Club, 1931 University Ave., St. Paul, Minn.

NORTHWEST LOCOMOTIVE ASSOCIATION. — R. M. Wigfield, Northern Pacific Ry., Room 1134, G. O. Bldg., St. Paul 1, Minn. Regular meetings, third Monday of each month, except June, July and August, Midway Club, 1931 University Ave., St. Paul, Minn.

PACIFIC RAILWAY CLUB. — S. E. Byler, 121 E. Sixth St., Los Angeles 14, Cal. Regular meetings, second Thursday of each alternate month at Palace Hotel, San Francisco, Cal., and Hotel Biltmore, Los Angeles, Cal.

RAILWAY BUSINESS ASSOCIATION. — P. H. Middleton, First National Bank Bldg., Chicago 3, Ill. Annual meeting November 16, 1951, Stevens Hotel, Chicago, Ill.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 614 Pittsburgh Life Bldg., Pittsburgh 22, Pa. Regular meetings, fourth Thursday of each month, except June, July, August, September and December, Fort Pitt Hotel, Pittsburgh, Pa.

RAILWAY ELECTRIC SUPPLY MANUFACTURERS' ASSOCIATION.—J. McC. Price, Allen Bradley Company, 445-447 N. LaSalle St., Chicago 10, Ill.

RAILWAY FUEL AND TRAVELING ENGINEERS' ASSOCIATION.—L. H. Peters, New York Central, Room 1213, 139 W. Van Buren St., Chicago, Ill. Annual meeting, September 17-19, 1951, Hotel Sherman, Chicago, Ill.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—A. W. Brown, 60 E. 42nd St., New York 17, N. Y.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION. — C. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with Communications Section of A.A.R.

RAILWAY TIE ASSOCIATION. — Roy M. Edmonds, 912 Shell Building, St. Louis 3, Mo. Annual meeting, September 25-27, 1951, Netherland Plaza Hotel, Cincinnati, Ohio.

ROADMASTERS AND MAINTENANCE OF WAY ASSOCIATION.—Miss Elise La Chance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September 17-19, 1951, Hotel Stevens, Chicago, Ill

SIGNAL APPLIANCE ASSOCIATION. — C. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with A.A.R. Signal Section.

SOUTHEASTERN RAILWAY DIESEL CLUB. — H. W. Brewer, Seaboard Air Line, Jacksonville, Fla. Regular meetings, second Tuesday in February, April, June, August, October and December, 9:30 a.m., Mayflower Hotel, Jacksonville, Fla.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB. — A. T. Miller, 4 Hunter St., S. E., Atlanta, Ga. Regular meetings third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta, Ga.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—F. I. Umhau, Southern Ry., Atlanta 3, Ga. Next meeting, July 25-26, 1951, General Oglethorpe Hotel, Savannah, Ga.

TORONTO RAILWAY CLUB.—D. L. Chambers, P. O. Box 8, Terminal "A," Toronto 2, Ont. Regular meetings, fourth Monday of each month, except June, July, and August, Royal York Hotel, Toronto, Ont.

TRACK SUPPLY ASSOCIATION.—Lewis Thomas, Q and C Company, 59 E. Van Buren St., Chicago 5, Ill.

WESTERN RAILWAY CLUB.—E. E. Thulin, Suite 339, Hotel Sherman, Chicago 1, Ill. Regular meetings, third Monday of February, March, April and May, Hotel Sherman, Chicago, Ill.

WESTERN ASSOCIATION OF RAILWAY TAX COMMISSIONERS.—A. B. Olson, 210 South Canal St., Chicago, Ill. Regular meetings, first Wednesday of each month, Traffic Club, Palmer House, Chicago, Ill.

SUPPLY TRADE

Peterson Vice-President Of Fairbanks, Morse

Robert H. Morse, Jr., president of Fairbanks, Morse & Co., Chicago, has announced that V. H. Peterson, manager of the company's railroad division, was elected vice-president in charge of railroad sales at a recent meeting of the board of directors.

Mr. Peterson has been with Fairbanks, Morse & Co., since May of 1946. Prior to that time he was associated with the Baldwin Locomotive Works as assistant to the president and manager of Baldwin's New York office.

After receiving his education in the public schools of Waterbury, Conn., Mr. Peterson first went to work as a draftsman for the Scovill Manufacturing Company of Waterbury. The industries of Waterbury at that time conducted a "continuation school" through which he won a scholarship that enabled him to enter Rensselaer Poly-

V. H. Peterson

technic Institute at Troy, N. Y. Upon graduation from Rensselaer in 1925 with a degree in mechanical engineering, Mr. Peterson entered the service of the Elliott Company, for which he worked successively as sales engineer in the Pittsburgh, Pa., office and district manager of the Rochester, N. Y., and Washington, D. C., offices. In 1938 he went to Jeannette, Pa., as assistant to the president, where he coordinated the company's sales activities. Three years later he was elected a vice-president and given responsibility for all sales, advertising and service activities of Elliott's three plants. It was from this position that Mr. Peterson left the Elliott organization to become assistant to the president of Baldwin in 1943. He joined Fairbanks Morse in 1946 as manager of eastern sales, with headquarters at New York, and within a month he succeeded John W. Barriger III (who became president of the Chicago, Indianapolis & Louisville) as manager of the combined diesel locomotive and railroad divisions at Chicago.

Poor & Co. Sales Higher

Net sales of Poor & Co. and its subsidiaries last year totaled $25,977,035, compared with $19,277,876 in 1949, according to the recently released annual report. Net income transferred to surplus, excluding income applicable to minority interest in subsidiary companies, was $1,438,281, compared with $1,031,162. Earnings for 1950, Fred A. Poor, chairman, and Philip W. Moore, president and treasurer, said in the report, "amounted to $8.99 per share on class A stock and $3.08 per share on Class B stock after providing for class A participation up to $2 per share."

Pierre O. Wood, sales engineer for **General Steel Castings Corporation,** has been appointed assistant manager of service, with offices at Granite City, Ill. After receiving his

Pierre O. Wood

B.S. degree in mechanical engineering at Purdue University, Mr. Wood worked in the shops of the St. Louis-San Francisco, completing an apprenticeship as machinist. He joined General Steel Castings in January 1929 as an inspector at its Commonwealth plant, later serving in the engineering and sales departments. In 1936 he became service engineer, and in 1945 returned to the sales department as sales engineer.

Grant A. Colton, formerly vice-president and general manager of the **Golden-Anderson Valve Specialty Company,** Pittsburgh, Pa., has been elected president of the firm.

The **Purdy Company,** of Chicago, has moved its general offices to 8754 Dobson avenue, Chicago 19.

Walter P. Arnold, executive assistant to **H. R. Condon,** vice-president and general manager of the wood preserving division of the **Koppers Company,** and **Frank H. Fischer,** assistant general manager of the division, in charge of activities in eastern United States, have been appointed vice-presidents in the division.

Mr. Arnold joined Koppers as a chemical engineer at its Orrville, Ohio, wood treating plant in 1925 and was appointed technical director for the

Walter P. Arnold

wood preserving division in 1935. He was appointed manager of railroad sales for the division at the Pittsburgh, Pa., general offices in 1946, and is still responsible for this phase of activities in addition to his work as executive assistant to the general manager, which appointment he received in April 1950.

Frank H. Fischer

Mr. Fischer joined a predecessor company of Koppers in 1919 and worked successively as purchasing agent and assistant sales manager. When this company became a part of the wood preserving division of Koppers, he was appointed district sales manager for the division. In 1943 he was appointed Pittsburgh district manager, with responsibility for procurement, sales, and production, and in April 1950 became assistant general manager of the division.

Ellis W. Test, assistant to president of **Pullman-Standard Car Manufacturing Company,** has retired, as reported in the April 2 *Railway Age*. A native of Washington,

The Acme Steel Company, Chicago, has make key changes in its eastern sales staff. George E. Helm (left), has been promoted to sales manager of a new district in Baltimore, Md., and also will serve as liaison with government bureaus in Washington, D. C. He formerly covered territories in New York, Rhode Island and Maryland. Charles E. Klinck (center), formerly sales engineer in the Philadelphia, Pa., district, has been appointed sales manager of that district, to succeed Charles J. Bruneel, who will retire in October. Bruce E. Cunningham (right), who has worked in the New York and New England sales districts, has been assigned to the newly created position of area special representative, with headquarters in New York City.

The company also has announced removal of its Philadelphia office from 401 North Broad street to 5667 Ogontz avenue

D. C., Mr. Test received his engineering degree from the University of Michigan in 1906, and began his career as a shop apprentice and draftsman on small railway cars with Fairbanks, Morse & Co., at Three Rivers, Mich., in the same year. He was associated with the Haskell & Barker Car Co., prior to that company's acquisition by

Ellis W. Test

the Pullman Company in 1922, at which time Mr. Test came to Chicago as assistant to the vice-president. Later he also served as chief engineer, and in 1924 when Pullman became Pullman Car & Manufacturing Corp., he continued as assistant to vice-president, being appointed assistant to president of Pullman-Standard Car Manufacturing Company in 1935.

The **Kershaw Manufacturing Company,** Montgomery, Ala., has announced the following promotions and appointments: **J. W. Davis,** formerly chief engineer, elected vice-president; **D. W. Hallberg,** appointed direct sales representative for the eastern United States, with headquarters at Orange, N. J.; **H. H. Williams,** formerly field service engineer, promoted to chief engineer, and **W. J. Dunaway,** elected vice-president of the **Royce Kershaw Company,** railroad contractors, at Montgomery.

Louis J. Francisco, New York sales manager for the **Formica Company** of Cincinnati, Ohio, for the past 11 years, has been elected vice-president in charge of sales and advertising to succeed the late **J. Roger White.** Mr. Francisco joined Formica in 1924 and worked in the factory until 1925, when he was assigned to the Chicago sales force. In 1927 he was

Louis J. Francisco

transferred to the New York office and in 1940 was appointed manager there. In his new position, Mr. Francisco will direct sales activities of 32 Formica sales offices throughout the United States and Canada, in addition to advertising and sales promotion programs.

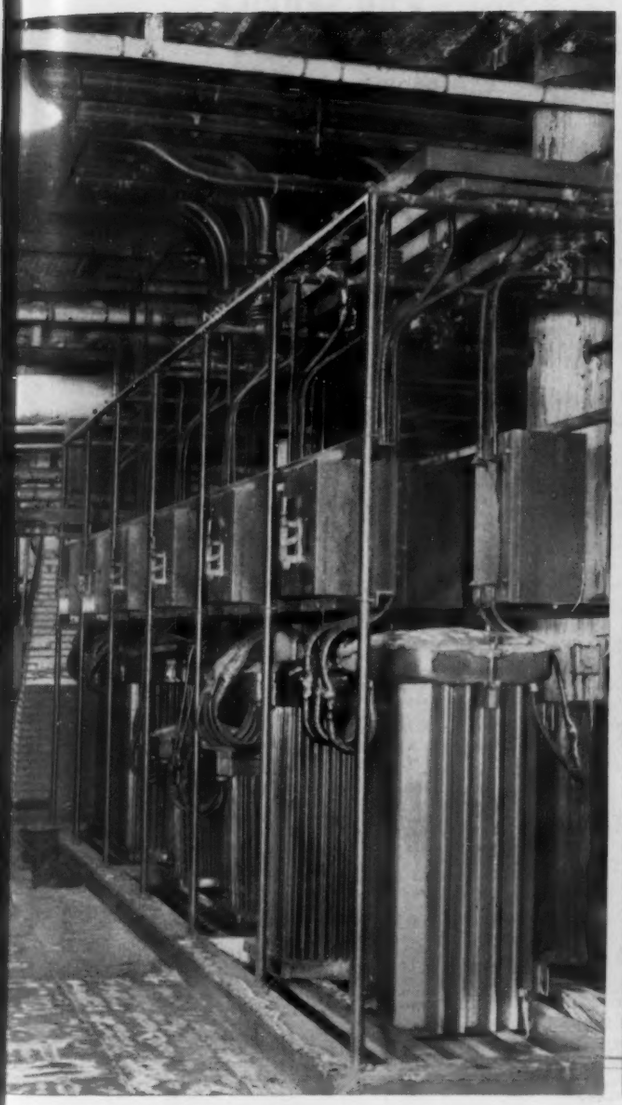
Robert B. Borucki, chief mechanical engineer of the **Transportation Specialties Company,** has been advanced to vice-president. After serving as mechanical draftsman, car draftsman and lead car draftsman with the Chicago, Milwaukee, St. Paul & Pacific from 1926 to 1936, Mr. Borucki was engineer of passenger car design for the Union Pacific until 1943. Subsequently, he was associated with the Railway division of Reynolds Metals Company as assistant mechanical engineer, mechanical engineer and chief engineer; while with Reynolds he designed the all aluminum box car and refrigerator car which were placed in service in 1945 and 1946. He is also co-author of the book, "Aluminum and Its Application," describing use of aluminum in railroad equipment. Mr. Borucki became chief mechanical engineer of Transportation Specialties in April 1948.

A wood preservation laboratory has been established within the biochemical research department of the **Dow Chemical Company,** under direction of **Fred J. Meyer,** assisted by **Ralph M. Gooch.**

The **Georgia-Pacific Plywood & Lumber Co.** has shortened its name to **Georgia-Pacific Plywood Company.** It also has opened a new warehouse in Pittsburgh, Pa., at 33rd street and Liberty avenue. This warehouse, which makes a total of 14 operated by Georgia-Pacific, was acquired recently under an option in which Georgia-Pacific received 100 per cent of the capital stock of the **Commercial Sash & Door Co.**

The **Air Reduction Company** will construct a new plant at Calvert City, Ky., costing upwards of $10,000,000. Construction will begin next July 1 and operations are expected to start by January 1, 1953. The new plant will be operated by the **National Carbide**

THEN and NOW... at the READING TERMINAL



Cumbersome transformers, related apparatus, and pipe framework have been replaced by modern load-center unit substations.

CONTINUITY OF SERVICE ASSURED by high interrupting capacity.

VOLTAGE CONTROL IMPROVED by holding it to close limits.

50,000 LB OF CABLE COPPER ELIMINATED.

VALUABLE FLOOR SPACE RELEASED for rental storage.

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INVESTMENT LOWERED by using *standard* units of equipment.

All these benefits resulted from installation of a modern G-E power-distribution system in Philadelphia's Reading Terminal.

Ask your G-E representative for full information about the advantages of modern, low-cost, efficient General Electric power-distribution systems, or write to *General Electric Company, Schenectady 5, N. Y.*

You can put your confidence in—

GENERAL ELECTRIC

152-17

Company, one of Air Reduction's 10 operating divisions, under direction of **Russell T. Lund,** operations manager of Carbide's Louisville, Ky., Keokuk, Iowa, and Ivanhoe, Va., plants. It will occupy part of a 1,000-acre tract fronting the Tennessee river, with the remaining acreage held in reserve for expansion.

Bradley A. Burnside has joined the sales department of the **American Lumber & Treating Co.,** with headquarters at Chicago, as assistant to **R. B. Putnam,** general sales manager.

OBITUARY

Joseph J. Edwards, vice-president of the O. M. Edwards Company, died recently while on a business trip in San Antonio, Tex. Mr. Edwards, born in Johnstown, N. Y., on January 8, 1887, was the son of Oliver Murray

Joseph J. Edwards

Edwards, who founded the O. M. Edwards Company in 1888. Early in his career he worked successively for the Southern and the Louisville & Nashville, after which he joined the O. M. Edwards Company.

John W. Foyle, for many years first vice-president of the Gustin-Bacon

John W. Foyle

Manufacturing Company, Kansas City, Mo., whose death was announced in the April 2 *Railway Age*, was born at Parsons, Kan., October 4, 1879. Educated in the parochial schools of his home town and at St. Mary's (Kan.) College, Mr. Foyle served in World War I with the rank of major. He was employed on the Missouri-Kansas-Texas, the Wabash, the Chicago, Indianapolis & Louisville and the Erie prior to joining Gustin-Bacon in 1913 as a salesman, handling railway supplies. A few years after he joined the company, he became vice-president. But his interest remained largely in the railroad department of the company, which he developed into a national organization. When his health began to fail slightly three years ago, Mr. Foyle gave up many of his railroad duties to devote his time to construction of the new Fairfax plant. He was a life member of the Purchases & Stores Division of the Association of American Railroads.

EQUIPMENT AND SUPPLIES

FREIGHT CARS

The **Western Maryland** has ordered 1,000 55-ton hopper cars from the Bethlehem Steel Company and 70 70-ton flat cars from the Greenville Steel Car Company. The inquiry for the hopper cars was reported in *Railway Age* of March 12, page 104.

PASSENGER CARS

The **Lehigh Valley** has ordered two rail diesel cars (RDC-2) from the Budd Company at an approximate cost of $300,000. The cars are scheduled to be placed in service late this summer between Hazelton, Pa., and Lehighton.

SIGNALING

The **Wabash** has ordered from the Union Switch & Signal Co. materials to install a traffic control system on 22.3 miles of single track between CA Jct., Mo., and Birmingham, Jct. The 2½-ft. control machine will be installed at Moberly, Mo. In addition to code and carrier equipment, the order includes style H-5 high and dwarf searchlight signals, M-23A dual-control electric switch machines, SL-25 electric switch locks, relays, rectifiers, transformers and housings. Field installation will be done by railroad forces.

IRON & STEEL

The **Florida East Coast** has ordered 500 net tons of 112-lb. rail and 500 net tons of 115-lb. rail from the Tennessee Coal, Iron & Railroad Co., and 147 net tons of structural steel from Ingalls Iron Works, Inc.

CAR SERVICE

Car-Movement Order Revised by I.C.C.

Revised operating regulations for the movement of freight cars have been prescribed by the Interstate Commerce Commission in Revised Service Order No. 866, effective April 1. The order supersedes Service Order No. 866 which was issued last September (see *Railway Age* of September 16, page 85).

The changes which the revision made in the original order's requirements were summarized in a March 30 circular by Chairman A. H. Gass of the Car Service Division, Association of American Railroads. This summarization follows:

Original Service Order 866 had a number of exceptions to the requirements for placement of loads and removal of loads and empties within 24 hours. These exceptions have generally been eliminated from the revised order but most of them have been covered in other ways. The following is a list of the original exceptions and an explanation of their status under the new order:

Non-revenue cars in company material service;

Railroad fuel;

Company material, the unloading of which must await preparation of track or bridge structures, requiring special work train service. (These have been eliminated from the new order, but the new order is worded so as to cover only cars subject to demurrage tariffs, hence, company material is automatically eliminated.)

Cars released on lines where less than daily service is provided, and efficient transportation would not warrant operation of a train for a few cars only. (This is omitted from the new order, but the new order applies with respect to moving empties and loads only in cases where switching service is performed more than four days a week. In other words, where service is now provided only five days a week, the railroads will be liable under the new order for failing to remove on Saturday loads or empties which are released prior to 7 a.m. Saturday unless such cars are moved before 7 a.m. Monday.)

Cars released at outlying stations where switching is not performed on Saturdays due to the majority of industries not working, and efficient transportation would not warrant operation of a train for a few cars only. (Same comment as immediately preceding.)

Privately owned or leased cars held or stored on private tracks when the ownership of the car and the track is the same. (Not subject to demurrage, hence, not now covered by order.)

Cars held for export, coastwise (including Great Lakes) or intercoastal shipping. (This is covered by specific exception in the new order—paragraph (b)(2).)

Cars held for reconsignment;

Cars held for customs inspection. (These are now exempt under the provision of paragraph (a)(2) of the order which requires that placement be made within 24 hours after disposition orders received.)

Cars held for order notify bill of lading. (This would appear to be covered by paragraph (a)(3) of the new order which requires that railroads make constructive placement when delivery for unloading can not be made because of any condition attributable to the consignee.)

Causes beyond the control of each railroad. (This exception is not covered in any way in the revised order.)

In the original order the items requiring placement of loads and removal of empties and loads within 24 hours had an exception covering Sundays and holidays. In the reivsed order the exception for Sundays and holidays does not appear with respect to these specific requirements but is covered in a general provision, paragraph (b)(3).

The only other change as compared to the original order is that in the reference to special car orders the wording has been changed to cover outstanding orders issued by W. C. Kendall, former chairman of the Car Service Division, as well as the present chairman.

I. C. C. Establishes Permit Plan for Lake-Cargo Coal

I. C. C. Service Order No. 875, effective from April 9 until October 9

(Continued on page 74)

CANADIAN PACIFIC RAILWAY COMPANY

Seventieth Annual Report of the Directors to the Shareholders

(Abridged)

Highlights

YEAR'S RESULTS	1950	1949	Increase or Decrease
Gross Earnings	$ 378,576,688	$ 363,252,094	$15,324,594
Working Expenses	340,556,331	342,620,125	2,063,794
Net Earnings	38,020,357	20,631,969	17,388,388
Ratio, Net to Gross Earnings	10.0%	5.7%	4.3%
Other Income	$ 23,236,264	$ 23,636,653	$ 400,389
Interest and Rental Charges	13,389,610	14,543,817	1,154,207
Dividends —Preference Stock	3,388,648	3,872,768	484,120
—Ordinary Stock	20,100,000	16,750,000	3,350,000
Balance for Modernization and Other Corporate Purposes	24,378,363	9,102,037	15,276,326

YEAR-END POSITION	1950	1949	Increase or Decrease
Property Investment	$1,424,197,017	$1,381,246,250	$42,950,767
Other Investments	190,172,027	193,444,952	3,272,925
Funded Debt	85,709,000	79,373,000	6,336,000
Reserves	518,842,273	503,527,526	15,314,747
Working Capital	89,556,389	89,283,032	273,357
TRAFFIC STATISTICS			
Tons of Revenue Freight Carried	53,915,746	56,445,684	2,529,938
Revenue Passengers Carried	10,541,492	11,969,457	1,427,965
Revenue per Ton Mile of Freight	1.33c	1.20c	0.13c
Revenue per Passenger Mile	2.81c	2.72c	0.09c

To the Shareholders:

The year 1950 was marked by the final decision on the application of Canadian railways launched in July 1948, for a 20% increase in freight rates; by the completion of the hearings of the Royal Commission on Transportation; by a strike of non-operating employees for higher wages and shorter hours, and the settlement of that dispute by compulsory arbitration.

Notwithstanding that the volume of traffic handled was lower than in 1949, net earnings from railway operations, while much below those of the war years, were greater than in any year since 1944. This resulted from higher freight rates which corrected, in some measure, the serious lack of balance between rates and costs which had developed progressively since the end of the war. Other income was slightly less than in 1949. Net income available for dividends on Ordinary Stock and for surplus amounted to $44 million, or $3.32 per share, compared with $26 million, or $1.93 per share, in the previous year.

Had not wage rates and material prices again risen, the freight rates established by the final decision of the Board of Transport Commissioners in the 20% case would have been sufficient to provide the level of rail earnings established on the so-called "requirements" basis laid down by the Board. However, after the aggregate increase of 20% in freight rates became effective on June 16, the cost of wages and materials rose substantially, and the resulting effect on operating expenses made it necessary for your Company, in association with other Canadian railways, to seek further relief.

An application was therefore filed with the Board on December 21 for authority to make an immediate general increase in freight rates amounting to 5%, except on coal and coke in respect of which the increase requested is 10c per ton. Also excepted are the rates on grain and grain products within Western Canada, which are fixed by statute or are related to the rates so fixed, and the rates on international and related traffic. The application also asks for such additional percentage increase in freight rates (later to be determined) as may be necessary to offset the increased operating expenses which will follow the inauguration of the forty-hour week.

The application includes also a request that the Board should establish for your Company a rate base representing the net investment in its railway property, and that the Board should fix a fair rate of return on such a rate base. It is the submission of your Company that the rate of return on such net investment should be not less than 6½%. In making this request the submission is that rates established on the "requirements" basis, as now applied by the Board, fail to yield a reasonable return.

The Board has been asked to undertake an audit of the investment in railway property of your Company, either by the staff of the Board or by independent experts to be appointed by the Board, the cost of which your Company has undertaken to bear.

The Income and Profit and Loss accounts of your Company show the following results for the year ended December 31, 1950:

Income Account

Gross Earnings		$378,576,688
Working Expenses		340,556,331
Net Earnings		$ 38,020,357
Other Income		23,236,264
		$ 61,256,621
Fixed Charges		13,389,610
Net Income		$ 47,867,011
Dividends—Preference Stock:		
2% paid August 1, 1950	$ 1,741,565	
2% payable February 1, 1951	1,647,083	
	$ 3,388,648	
Dividends—Ordinary Stock:		
2% paid October 2, 1950	$ 6,700,000	
4% payable February 28, 1951	13,400,000	
	20,100,000	
		23,488,548
Balance transferred to Profit and Loss Account		$ 24,378,363

Profit and Loss Account

Profit and Loss Balance December 31, 1949		$206,730,777
Final Dividend of 3% on the Ordinary Stock, declared from the earnings of the year 1949, paid March 31, 1950		10,050,000
		$196,680,777
Balance of Income Account for the year ended December 31, 1950	$24,378,363	
Portion of steamship insurance recoveries representing compensation for increased cost of tonnage replacement	229,741	
Excess of considerations received for sales of properties over book values	2,791,713	
Miscellaneous Net Credit	555,666	
		27,955,483
Profit and Loss Balance December 31, 1950, as per Balance Sheet		$224,636,260

Railway Operations

Gross earnings increased $15 million, or 4.2%, as compared with 1949.

Freight revenue in 1950 was approximately $14 million higher than in 1949. This was entirely the result of increases in freight rates which produced approximately $23 million more revenue. The volume of traffic handled was lower, and there would have been a reduction in freight revenue of some $9 million but for the increases in freight rates. The average revenue per ton mile for the year was 1.33c, an increase of 0.13c over 1949. Tonnage carried amounted to 53.9 million tons, a decrease of 2.5 million tons, and the average haul decreased by 4 miles to 426 miles.

The decline in the volume of freight traffic was most marked in the early months of the year, and practically all types of traffic were affected. In the second quarter a change in this trend was apparent, and in the latter half of the year, except in August when the strike occurred, increases in the tonnage of every commodity group were being recorded, with the exception of agricultural and animal products.

The normal seasonal grain movement in Western Canada was distorted by an unusually late harvest, and the quality of the crop was adversely affected by frosts in August. Grain handlings on your western lines decreased by 71 million bushels and earnings from grain and grain products decreased $9.6 million.

Mail earnings were $2.2 million higher as a result of the increase of 25.8% in mail rates negotiated with the Post Office Department and effective as from December 1, 1948. A substantial part of the increase in mail earnings for 1950 is attributable to the retroactive settlement in respect of the year 1949 and the month of December 1948.

Working expenses, at $341 million, were $2 million less than in 1949. Approximately $2.6 million of expenses were due to the wage increase of 7c per hour.

Maintenance expenses, at $140.6 million, decreased $5.9 million—$2.9 million in maintenance of way and structures and $3 million in maintenance of equipment. Maintenance expenditures to the amount of $10.25 million were paid for out of the Maintenance Fund. Of this amount $9 million was for track material, an increase of $2.75 million over last year. Withdrawals from the Fund were again computed on the basis of the formula used in previous years.

Transportation expenses, at $149.2 million, decreased $4.8 million, or 3%. The installation of some diesel power, the conversion of certain coal-burning locomotives to oil, and improvements in operating performance have aided in keeping transportation costs lower than would otherwise have been possible in view of increased material prices and higher wage rates. Principally as a result of increased freight rates the ratio of transportation expenses to gross earnings decreased from 42.4% in 1949 to 39.4%.

Hire of equipment for the year showed a net credit of 1.6 million compared with a net debit of $1.3 million in 1949, reflecting the increased retention of cars on United States railway lines in 1950.

Railway tax accruals increased $10.6 million, of which $9.7 million was for income taxes.

Railway net earnings for the year were $38 million and represented a return of 3.5% on the net investment in the rail property of your Company at the end of the year.

Other Income

Other income amounted to $23.2 million, a decrease of $400,000 from 1949.

Net earnings from ocean and coastal steamships, at $3.1 million, increased $862,000.

Net earnings of hotels decreased $738,000. Revenues were lower at most of the city hotels and all of the resort establishments, and operating costs increased over last year.

Net earnings from communication services increased $365,000. Commercial telegraph revenues increased as a result of the higher rates which went into effect July 4, 1949, and a larger volume of traffic. Rents from leased wire services were also greater.

Dividend income was approximately the same as last year. The dividend paid by The Consolidated Mining and Smelting Company of Canada, Limited, was at the rate of $9.50 per share, the same rate as in 1949.

Net income from interest, separately operated properties and miscellaneous sources, at $3.6 million, decreased $846,000. The deficit of the Canadian Australasian Line, in which your Company owns a half interest, was substantially larger than in 1949. Bond interest, which last year included a payment from the Duluth, South Shore and Atlantic Railroad Company in respect of the years 1945 to 1948 inclusive, was also less. Offsetting these, in part, were a profit from Canadian Pacific Air Lines operations, compared with a loss in 1949, and a decrease in the operating loss of the Northern Alberta Railways, half of which is borne by your Company.

Fixed Charges

Fixed charges amounted to $13.4 million, a decrease of $1.1 million. The cost of interest and rental charges payable in sterling was substantially lower as a result of the devaluation which took place in September 1949. The freeing of the Canadian dollar in October 1950, and its subsequent rise in relation both to sterling and United States currency, had only a minor effect on the charges for the year. Interest on Collateral Trust Bonds increased because of a new issue of such bonds during the year.

Net Income and Dividends

Net income, after fixed charges, amounted to $47.9 million, an increase of $18.1 million. After payment of dividends of 4% on the Preference Stock, earnings available for dividends on Ordinary Stock and for surplus amounted to $44 million. Dividends aggregating $20.1 million, being at the rate of $1.50 per share, were declared on the Ordinary Stock out of 1950 earnings.

Your Directors pointed out that one-half of the total dividend on Ordinary Stock for the year was attributable to railway operations and one-half to income from other sources.

Balance Sheet

Total assets at the end of the year amounted to $1,781 million, an increase of $67 million.

The increase in property investment was $43 million, of which $29.3 million was in rolling stock.

The $10.7 million which had been appropriated from the Steamship Replacement Fund in 1949 was replaced in that Fund. Withdrawals therefrom during the year included $3 million on account of reconversion costs of the "Empress of Scotland" and construction costs of the "Princess of Nanaimo".

Working capital at $89.6 million was approximately the same as last year.

The loan of $1.4 million made to the Company in 1932 by the Government of Canada under the Unemployment and Farm Relief Act became due and was repaid during the year.

Finance

The amount of serial equipment obligations discharged during the year was $12 million, and $1.7 million of 3½% Convertible Collateral Trust Bonds, maturing February 15, 1951, were purchased and cancelled.

Convertible Twenty Year 3⅛% Collateral Trust Bonds dated April 1, 1950 were issued and sold in the principal amount of $20 million, secured by pledge of $24 million principal amount of Consolidated Debenture Stock. These Bonds are callable on or after May 15, 1952 at 101.50%, up to and including March 31, 1954, and in each succeeding year up to and including March 31, 1968, at reducing percentages of one-tenth of one per cent per annum, and thereafter at 100%; plus accrued interest in each case. At least 45 days' notice must be given of any such call. The holders have the right at any time commencing April 1, 1952, and up to and including April 1, 1959, to convert their bonds into shares of Ordinary Capital Stock in the ratio of four

shares of the par value of $25 each to each $100 principal amount of the bonds.

These transactions resulted in a net increase of $6.3 million in funded debt during the year and an increase of $21.6 million in the amount of Consolidated Debenture Stock pledged as collateral.

Pensions

Pension expense for the year amounted to $11 million. This included the proportion of pension allowances paid by your Company, its contribution to the Pension Trust Fund and taxes imposed in respect of employees covered by the United States Railroad Retirement Act.

The number of employees on the pension payroll at the end of 1950 was 11,208, an increase of 820. During the year 1,390 employees were pensioned and 570 pensions were terminated by death.

Canadian Pacific Air Lines, Limited

Your Air Lines had a net profit of $203,000 for the year, compared with a net loss of $113,000 in 1949.

Gross revenues from operations in Canada increased 9.9%. Operations were expanded by the inauguration of a new service between Edmonton and North Battleford with an intermediate stop at Lloydminster. New schedules were put into effect to meet the needs of local traffic between Edmonton and Dawson Creek and between Vancouver and Prince George.

The Pacific services which were inaugurated in July 1949 were in operation throughout the whole of 1950. After the outbreak of hostilities in Korea the Government of Canada requested your Air Lines to provide increased service to Tokyo, as part of Canada's contribution to the United Nations effort, and this operation was eventually increased to four trips weekly.

United States Subsidiaries

Net income of Minneapolis, St. Paul & Sault Ste. Marie Railroad Company for 1950, after provision for fixed and contingent charges, amounted to $1.5 million, an increase of $400,000 as compared with 1949.

A dividend of $1.00 per share on the capital stock, the same as in the previous year, was paid on April 1, 1950 out of earnings for 1949. The amount of the dividend received by your Company in 1950, including the premium on United States funds, was $398,000.

No interest was received during 1950 on the First Mortgage Income Bonds of the Duluth, South Shore and Atlantic Railroad Company, as a deficit was incurred by that Company in 1949. Results were more satisfactory in 1950 and net income after fixed and contingent interest amounted to $688,000.

Hearings in the reorganization proceedings of the Wisconsin Central Railway Company on the review of the plan of reorganization approved by the Interstate Commerce Commission in 1947 were concluded during the year. On December 8 the Examiner issued his proposed report, which outlined a new plan extensively modifying the previous one. The Commission distributed this report to the interested parties, who were given 45 days in which to file any objections.

Rates

In a judgment dated February 28, 1950, the Board of Transport Commissioners for Canada authorized Canadian railways to increase freight rates by 16%, in lieu of the increase of 8% authorized in the judgment of September 20, 1949. The 16% increase was put into effect on March 23. In a decision dated May 11, the Board authorized an increase of 20%, superseding the 16% increase. The 20% increase became effective June 16, bringing rates on intra-Canadian traffic (other than grain in Western Canada) up to 45% above their pre-war level. This increase is much less than the rise which has taken place in material and labour costs.

The rates on grain and grain products moving from Western Canada to Fort William which were fixed by statute, as well as the rates on grain and grain products to Pacific Coast ports for export, and on grain and grain products within Western Canada, have not been increased. The rates on international traffic and the rates on certain import and export traffic were not covered by the judgments of the Board because, for technical reasons, these rates are increased as and when increases in United States rates are authorized by the Interstate Commerce Commission.

Special commodity rates on agricultural implements moving from Eastern Canada to Western Canada were cancelled on July 24. The effect of this was that the rates on such traffic reverted to applicable class rates, resulting in an average increase of 17¢ per hundred pounds. Carload rates on livestock were generally increased effective December 15 by varying amounts, yielding an average increase of approximately 8¢ per hundred pounds.

Proposed passenger tariffs filed by Canadian railways in 1949, which would have increased commutation fares by varying amounts, were suspended by the Board pending public hearings. Following the hearings, the Board authorized increased fares which it is estimated will yield your Company about one-third of the increased revenues expected on the basis of the suspended tariffs. The request of the Canadian Passenger Association, on behalf of its member lines, for leave to appeal from the judgment of the Board to the Supreme Court has been refused by the Board.

An increase amounting to 25.8% in mail rates was granted by the Post Office Department retroactive to December 1, 1948. This increase followed prolonged negotiations on an application for an increase of 55% made in the Fall of 1948 by the Railway Association of Canada. The increase in mail rates is the first since 1922, although the costs of providing the service have increased substantially since that time.

Improvements in Service

The new classification yard in the Montreal area, which had been under construction since 1947, was officially opened on July 6. The facilities of the yard make it possible to handle speedily and efficiently a substantially larger number of cars than could be handled previously in the separate yards, which are in process of being closed down.

New motive power delivered during the year consisted of 58 diesel-electric units, which were put in service on the Schreiber Division in Ontario. There were 1,870 new freight cars and 114 passenger train cars placed in service during the year. A new type of passenger car, a "Restaurant Sleeper", was introduced on two trains late in the year. The car combines light meal service with bedroom and section sleeping accommodation, and has been favourably received by the public.

Capital Appropriations

In anticipation of your confirmation, capital appropriations aggregating $28.7 million, in addition to those approved at the last Annual Meeting, were authorized by your Directors during the year. These included $21.4 million for 3,000 box cars.

Your approval will be requested also for capital appropriations of $54.5 million for the year 1951.

The appropriations for new rolling stock make provision for 40 diesel-electric units, 3,575 freight cars, 25 baggage and express cars and 272 work cars. The diesel-electric units consist of 28 road units, which will be placed in freight service on the Laggan and Mountain Subdivisions between Calgary and Revelstoke, and 12 yard switchers.

Officers and Employees

Your Directors desire to express their sincere appreciation of the effective services rendered by officers and employees.

For the Directors,

W. A. Mather

President.

Montreal, March 12, 1951.

Freight revenue in 1950 was approximately $14 million higher than in 1949. This was entirely the result of increases in freight rates which produced approximately $23 million more revenue. The volume of traffic handled was lower, and there would have been a reduction in freight revenue of some $9 million but for the increases in freight rates. The average revenue per ton mile for the year was 1.33c, an increase of 0.13c over 1949. Tonnage carried amounted to 53.9 million tons, a decrease of 2.5 million tons, and the average haul decreased by 4 miles to 426 miles.

The decline in the volume of freight traffic was most marked in the early months of the year, and practically all types of traffic were affected. In the second quarter a change in this trend was apparent, and in the latter half of the year, except in August when the strike occurred, increases in the tonnage of every commodity group were being recorded, with the exception of agricultural and animal products.

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Your Directors pointed out that one-half of the total dividend on Ordinary Stock for the year was attributable to railway operations and one-half to income from other sources.

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The loan of $1.4 million made to the Company in 1932 by the Government of Canada under the Unemployment and Farm Relief Act became due and was repaid during the year.

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shares of the par value of $25 each to each $100 principal amount of the bonds.

These transactions resulted in a net increase of $6.3 million in funded debt during the year and an increase of $21.6 million in the amount of Consolidated Debenture Stock pledged as collateral.

Pensions

Pension expense for the year amounted to $11 million. This included the proportion of pension allowances paid by your Company, its contribution to the Pension Trust Fund and taxes imposed in respect of employees covered by the United States Railroad Retirement Act.

The number of employees on the pension payroll at the end of 1950 was 11,208, an increase of 820. During the year 1,390 employees were pensioned and 570 pensions were terminated by death.

Canadian Pacific Air Lines, Limited

Your Air Lines had a net profit of $203,000 for the year, compared with a net loss of $113,000 in 1949.

Gross revenues from operations in Canada increased 9.9%. Operations were expanded by the inauguration of a new service between Edmonton and North Battleford with an intermediate stop at Lloydminster. New schedules were put into effect to meet the needs of local traffic between Edmonton and Dawson Creek and between Vancouver and Prince George.

The Pacific services which were inaugurated in July 1949 were in operation throughout the whole of 1950. After the outbreak of hostilities in Korea the Government of Canada requested your Air Lines to provide increased service to Tokyo, as part of Canada's contribution to the United Nations effort, and this operation was eventually increased to four trips weekly.

United States Subsidiaries

Net income of Minneapolis, St. Paul & Sault Ste. Marie Railroad Company for 1950, after provision for fixed and contingent charges, amounted to $1.5 million, an increase of $400,000 as compared with 1949.

A dividend of $1.00 per share on the capital stock, the same as in the previous year, was paid on April 1, 1950 out of earnings for 1949. The amount of the dividend received by your Company in 1950, including the premium on United States funds, was $398,000.

No interest was received during 1950 on the First Mortgage Income Bonds of the Duluth, South Shore and Atlantic Railroad Company, as a deficit was incurred by that Company in 1949. Results were more satisfactory in 1950 and net income after fixed and contingent interest amounted to $688,000.

Hearings in the reorganization proceedings of the Wisconsin Central Railway Company on the review of the plan of reorganization approved by the Interstate Commerce Commission in 1947 were concluded during the year. On December 8 the Examiner issued his proposed report, which outlined a new plan extensively modifying the previous one. The Commission distributed this report to the interested parties, who were given 45 days in which to file any objections.

Rates

In a judgment dated February 28, 1950, the Board of Transport Commissioners for Canada authorized Canadian railways to increase freight rates by 16%, in lieu of the increase of 8% authorized in the judgment of September 20, 1949. The 16% increase was put into effect on March 23. In a decision dated May 11, the Board authorized an increase of 20%, superseding the 16% increase. The 20% increase became effective June 16, bringing rates on intra-Canadian traffic (other than grain in Western Canada) up to 45% above their pre-war level. This increase is much less than the rise which has taken place in material and labour costs.

The rates on grain and grain products moving from Western Canada to Fort William which were fixed by statute, as well as the rates on grain and grain products to Pacific Coast ports for export, and on grain and grain products within Western Canada, have not been increased. The rates on international traffic and the rates on certain import and export traffic were not covered by the judgments of the Board because, for technical reasons, these rates are increased as and when increases in United States rates are authorized by the Interstate Commerce Commission.

Special commodity rates on agricultural implements moving from Eastern Canada to Western Canada were cancelled on July 24. The effect of this was that the rates on such traffic reverted to applicable class rates, resulting in an average increase of 17¢ per hundred pounds. Carload rates on livestock were generally increased effective December 15 by varying amounts, yielding an average increase of approximately 8¢ per hundred pounds.

Proposed passenger tariffs filed by Canadian railways in 1949, which would have increased commutation fares by varying amounts, were suspended by the Board pending public hearings. Following the hearings, the Board authorized increased fares which it is estimated will yield your Company about one-third of the increased revenues expected on the basis of the suspended tariffs. The request of the Canadian Passenger Association, on behalf of its member lines, for leave to appeal from the judgment of the Board to the Supreme Court has been refused by the Board.

An increase amounting to 25.8% in mail rates was granted by the Post Office Department retroactive to December 1, 1948. This increase followed prolonged negotiations on an application for an increase of 55% made in the Fall of 1948 by the Railway Association of Canada. The increase in mail rates is the first since 1922, although the costs of providing the service have increased substantially since that time.

Improvements in Service

The new classification yard in the Montreal area, which had been under construction since 1947, was officially opened on July 6. The facilities of the yard make it possible to handle speedily and efficiently a substantially larger number of cars than could be handled previously in the separate yards, which are in process of being closed down.

New motive power delivered during the year consisted of 58 diesel-electric units, which were put in service on the Schreiber Division in Ontario. There were 1,870 new freight cars and 114 passenger train cars placed in service during the year. A new type of passenger car, a "Restaurant Sleeper", was introduced on two trains late in the year. The car combines light meal service with bedroom and section sleeping accommodation, and has been favourably received by the public.

Capital Appropriations

In anticipation of your confirmation, capital appropriations aggregating $28.7 million, in addition to those approved at the last Annual Meeting, were authorized by your Directors during the year. These included $21.4 million for 3,000 box cars.

Your approval will be requested also for capital appropriations of $54.5 million for the year 1951.

The appropriations for new rolling stock make provision for 40 diesel-electric units, 3,575 freight cars, 25 baggage and express cars and 272 work cars. The diesel-electric units consist of 28 road units, which will be placed in freight service on the Laggan and Mountain Subdivisions between Calgary and Revelstoke, and 12 yard switchers.

Officers and Employees

Your Directors desire to express their sincere appreciation of the effective services rendered by officers and employees.

For the Directors,

W. A. Mather

President.

Montreal, March 12, 1951.

Canadian Pacific Railway Company • General Balance Sheet, December 31, 1950

ASSETS

Property Investment:		
Railway, Rolling Stock and Inland Steamships	$1,002,596,954	
Improvements on Leased Property	117,312,306	
Stocks and Bonds—Leased Railway Companies	134,909,063	
Ocean and Coastal Steamships	65,410,370	
Hotel, Communication and Miscellaneous Properties	103,968,324	
		$1,424,197,017
Other Investments:		
Stocks and Bonds—Controlled Companies	$ 72,227,794	
Miscellaneous Investments	47,435,355	
Advances to Controlled and Other Companies	6,572,319	
Mortgages Collectible and Advances to Settlers	1,057,744	
Deferred Payments on Lands and Townsites	7,731,393	
Unsold Lands and Other Properties	10,846,779	
Maintenance Fund	7,600,000	
Insurance Fund	13,188,540	
Steamship Replacement Fund	23,512,103	
		190,172,027
Current Assets:		
Material and Supplies	$ 37,930,438	
Agents' and Conductors' Balances	16,455,929	
Miscellaneous Accounts Receivable	23,383,779	
Government of Canada Securities	39,818,360	
Cash	44,214,875	
		161,803,381
Unadjusted Debits:		
Insurance Prepaid	$ 488,750	
Unamortized Discount on Bonds	2,967,989	
Other Unadjusted Debits	1,307,020	
		4,763,759
		$1,780,936,184

LIABILITIES

Capital Stock:		
Ordinary Stock	$335,000,000	
Preference Stock—4% Non-cumulative	137,256,921	
		$ 472,256,921
Perpetual 4% Consolidated Debenture Stock	$333,552,729	
Less: Pledged as collateral to bonds and equipment obligations	38,114,500	
		295,438,229
Funded Debt		85,709,000
Current Liabilities:		
Pay Rolls	$ 9,401,052	
Audited Vouchers	12,272,206	
Net Traffic Balances	3,828,099	
Miscellaneous Accounts Payable	6,619,090	
Accrued Fixed Charges	726,685	
Unmatured Dividends Declared	15,047,083	
Other Current Liabilities	24,352,777	
		72,246,992
Deferred Liabilities		3,040,010
Reserves and Unajusted Credits:		
Maintenance Reserves	$ 7,600,000	
Depreciation Reserves	489,866,749	
Investment Reserves	4,068,165	
Insurance Reserve	13,188,540	
Contingent Reserves	4,118,819	
Unadjusted Credits	6,241,495	
		525,083,768
Premium on Capital and Debenture Stock		34,458,562
Land Surplus		68,066,442
Profit and Loss Balance		224,636,260
		$1,780,936,184

ERIC A. LESLIE,
Vice-President and Comptroller

TO THE SHAREHOLDERS,
CANADIAN PACIFIC RAILWAY COMPANY:

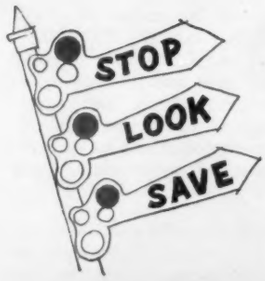
We have examined the above General Balance Sheet of the Canadian Pacific Railway Company as at December 31, 1950, the Income and Profit and Loss Accounts for the year ending on that date and other related schedules, and have compared them with the books and records of the Company.

The records of the securities owned by the Company at December 31, 1950, were verified by an examination of those securities which were in the custody of its Treasurer and by certificates received from such depositaries as were holding securities in safe custody for the Company.

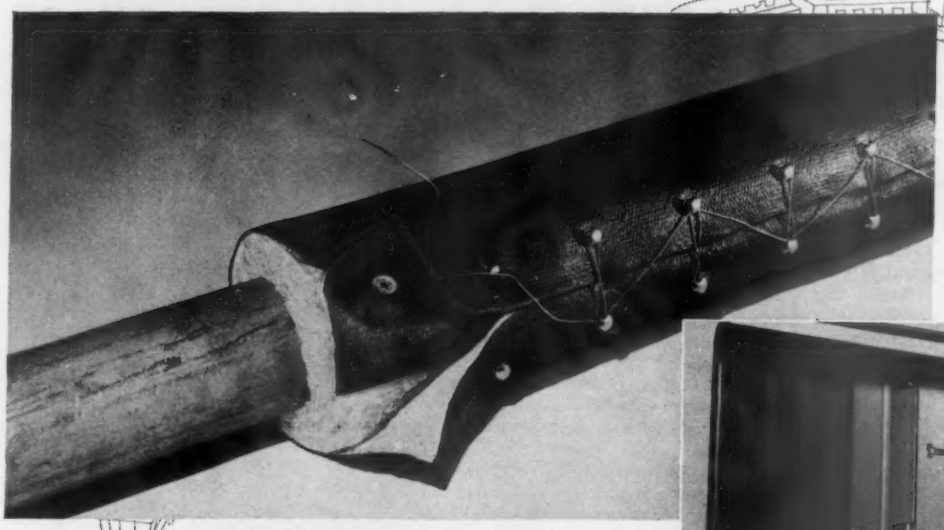
In our opinion the General Balance Sheet, Income and Profit and Loss Accounts and the other related schedules are properly drawn up so as to present fairly the financial position of the Company at December 31, 1950, and the results of its operations for the year then ended, according to the best of our information and the explanations given to us and as shown by the books of the Company.

PRICE WATERHOUSE & CO.
Chartered Accountants

Montreal, March 9, 1951



New J-M Insulation saves heat... helps stop cold-car complaints



Thermo-Wrap is secured to steam pipes with lacing hooks that are properly spaced to facilitate installation. Note double lap at joints to provide a weather-tight seal.

Thermo-Wrap makes steam heat available throughout the entire length of the train—helps keep passengers warm and comfortable even on coldest days.

Cover your car heating lines with Thermo-Wrap, the improved Johns-Manville lace-type insulation, and you'll keep costly heat *inside* the pipes where you want it.

This not only saves fuel—it also helps keep passengers warm and comfortable throughout the length of the train!

Thermo-Wrap owes its exceptional efficiency to an insulating medium of twisted asbestos fibers held together by asbestos yarn, and enclosed in a woven asbestos jacket. Over its entire outside surface, this jacket is coated with a tough, durable, and fire-resistant waterproof coating to assure maximum protection against abrasion, mechanical abuse and moisture. Even in the most rugged railroad service, Thermo-Wrap stands up under the impact of rain, sleet, snow and flying ballast.

In addition to the fuel-saving serviceability factors, you will find Thermo-Wrap economical to use because it can be quickly and easily applied on straight or curved pipe . . . fits tight and stays tight on the job. For further information, write for Folder IN-132A. Address Johns-Manville, Box 290, New York 16, N. Y. In Canada: 199 Bay Street, Toronto 1, Ontario.

JOHNS-MANVILLE JM PRODUCTS

Johns-Manville

93 YEARS OF SERVICE TO TRANSPORTATION

(Continued from page 68)
unless otherwise modified, established a permit system governing the movement of lake-cargo coal to lower Great Lakes ports. The commission's permit agent under the order is W. J. McGarry, manager of the Ore & Coal Exchange, Cleveland, Ohio.

I.C.C. Service Order No. 856, which provides that Saturdays and Sundays occurring after the expiration of free time shall be included in computing demurrage on all freight cars, has been modified by Amendment No. 3. The amendment continues until May 1 the exemption which applies to cars loaded or unloaded at the ports.

I.C.C. Service Order No. 865, which imposes superdemurrage charges running up to $20 a day, has been modified by Amendment No. 7 which set back the expiration date from April 1 to July 15.

I.C.C. Service Order No. 867, which governs the handling of trap and ferry cars containing l.c.l. freight within a switching district, has been modified by Amendment No. 2, which set back the expiration date from March 31 to June 30.

I.C.C. Service Order No. 868, which is not in effect, having been suspended indefinitely last September, has been modified by Amendment No. 1., which set back the expiration date to June 30. The order was designed to suspend the operation of tariff rules which permit freight cars to be used otherwise than subject to the carload minimum weight for each car used.

I.C.C. Service Orders Nos. 870 and 871, which restrict the free time on cars loaded at ports, have been modified by amendments (No. 1 in each case) which set back the expiration dates from April 1 until July 15.

CONSTRUCTION

Birmingham Southern.—Work is expected to begin shortly on a 60-ft. by 160-ft. corrugated galvanized iron extension of the present diesel locomotive shop at Fairfield, Ala. Fabrication and erection of the building will be done under a contract not yet awarded, while the rest of the work — largely changes in track layout — will be undertaken by company forces. Exclusive of shop machinery, the building will cost an estimated $155,000. Work has begun on a 4,600-ft. passing track near Thomas, on the Ensley-Birmingham line, to relieve congestion at a point where deliveries are made to connecting lines. This work is being undertaken entirely by company forces at a cost of $48,000.

Raleigh-Rolesville.—This recently-organized company has applied to the I.C.C. for authority to construct and operate a 15.5-mi. line from a connection with the Atlantic Coast Line at Lessiter, N. C., to connections with the Norfolk Southern and Seaboard Air Line at a point near Raleigh. Arnold M. Davis of Raleigh is president of the applicant company, and the application said the "general plan" of financing will be to issue first and second mortgage bonds.

FINANCIAL

Nickel Plate Common Stock Split 5-for-1

Preferred and common stockholders of the New York, Chicago & St. Louis in a special meeting at Cleveland, Ohio, on March 29, approved a plan to split the road's common stock by issuing 5 shares for each share held. (See *Railway Age* of February 12, page 137.) Voted in favor of the split were 273,973 of the 360,567 outstanding preferred shares and 328,044 of the 371,202 outstanding common shares. An affirmative vote of two-thirds of each class of stock was necessary for approval.

Subject to Interstate Commerce Commission authority, the Nickel Plate will issue 1,856,010 shares of $20 par value common stock in exchange for presently outstanding shares of $100 par value common stock. L. L. White, Nickel Plate president, described the split as the "next logical step in the Nickel Plate's long term program for improvement of its financial structure, as well as its business and physical properties."

Other charter amendments voted at the special meeting provide for full preferred stock voting rights, share for share with the common stock; changing the date of stockholders' annual meeting from the first Wednesday to the third Tuesday each May; and a measure of flexibility in issuing new or additional series of preferred stock.

Erie.—*Acquisition.*—This road has applied to the I.C.C. for authority to acquire the New Jersey & New York in accordance with terms set forth in the latter's plan of reorganization. This plan was filed recently with the commission. (See *Railway Age* of March 12, page 106). The Erie said it has claims against the N.J.&N.Y. totaling $1,779,332, representing unpaid bills for various facilities, services, equipment and supplies since the latter road filed for reorganization June 30, 1938. The N.J. & N.Y. consists of two disjoined segments, totaling approximately 28.1 miles, and is "principally" a commuter line.

Great Northern.—*Acquisition.*—The Boeing Airplane Company has been authorized to intervene in connection with this road's pending application for authority to acquire control of the Pacific Coast Railroad. (See *Railway Age* of November 18, 1950, page 80.) Boeing said the P.C., which serves one of its plants, now provides joint through rates and through routes with two other roads in addition to the G.N. It added that it would ask the I.C.C. to impose conditions so as to insure the continued independent operation of the P.C. under G.N. control.

Missouri-Kansas-Texas. — *Recapitalization Studied.*—"The large accumulation of dividends on the preferred stock clearly indicates that present capitalization of the company should be adjusted to a sound and more realistic basis as soon as conditions will permit," Donald V. Fraser, president, and R. J. Morfa, chairman, said in this road's recently released annual report for 1950. "Active study of this problem is now under way," they added. Dividend arrears on the Katy's 7 per cent cumulative preferred stock totaled $89,878,924, or $134.75 a share, on December 31, 1950.

Southern Pacific. — *Trackage Rights.*—This road has applied to the I.C.C. for approval of a trackage rights agreement with the Los Angeles & Salt Lake, covering approximately 6.6 miles of line between Hillgrove, Cal., and a point near Whittier Junction. The application said use of this trackage by the S.P. would provide that road with an alternate route and enable it to avoid congestion in the Los Angeles area.

New Securities

Application has been filed with the I.C.C. by:

NEW YORK, CHICAGO & ST. LOUIS—To change its common stock from $100 par value per share to $20 per share, and to issue this new stock in exchange for the old on a 5-for-1 basis. The road also asked for authority to modify its series A cumulative preferred stock, so as to clarify voting rights and make other changes, but not to change the par value. According to the road, these modifications will give the common stock a wider market, and give more flexibility in carrying out possible future preferred stock financing. At present the road has 371,205.34 shares of common outstanding in the hands of the public as well as 360,577.71 shares of the series A preferred. Stock held in the company treasury, totaling 125,043.66 shares of common and 407.29 shares of preferred, would also be affected by the proposed changes.

UNION OF PITTSBURGH.—To issue two notes, totaling $7,300,000, to the United States Steel Corporation as evidence of money previously advanced to the road. One note, for $500,000, would represent the unpaid balance on a 1948 loan of $1,000,000, which was used to purchase 13 diesel-electric locomotives. This note would be payable in five annual intsallments and would bear interest at 2¼ per cent. The second note, for $6,800,000, would bear interest at 4 per cent, payable monthly, and would be payable on demand. It would represent the sum of amounts loaned to the road from time to time on open account.

Division 4 of the I.C.C. has **authorized:**

ILLINOIS CENTRAL.—To assume liability for $3,600,000 of series FF equipment trust certificates to finance in part 42 diesel-electric locomotives costing approximately $4,851,372. (See *Railway Age* of March 12, page 106.) The certificates, to be dated April 1, will mature in 30 semiannual installments of $120,000 each, beginning October 1, 1951. Division 4's report approved a selling price of 99.7 with interest at 2⅞ per cent—the bid of Salomon Bros. & Hutzler and three associates—which will make the average annual cost of the proceeds approximately 2.92 per cent. The certificates were reoffered to the public at prices yielding from 2 to 2.95 per cent, according to maturity.

(Continued on page 79)

for DC Heliwelding

Your best bet is AIRCO THOR-TUNG ELECTRODES

Here's a tungsten electrode that's especially designed for all positions on straight polarity, DC Heliwelding on stainless steel, copper, mild steel and aluminum, using Heliwelding, Airco's inert gas arc welding process. Made with thoriated tungsten, long-noted for its excellent electron emission characteristics, Airco Thor-Tung offers these advantages —

IT DOESN'T MELT . . .

Airco Thor-Tung does not "ball up" at the end of the electrode nor does it sputter off into the puddle when subjected to high arc welding temperatures — because of its cool operating characteristics, longer life is obtained from each electrode.

NO CONTAMINATION . . .

Airco Thor-Tung permits the operator to "touch-start" directly on the work without contaminating the work or the electrode. Uncontaminated electrodes increase production and result in better welds.

EXCELLENT ARC STABILITY . . .

One of the keys to consistent weld quality and ease of operation is good arc stability. With Airco Thor-Tung, the arc is very stable and does not wander or climb up the electrode even at low currents. Touch starting is made easy even with currents as low as 15 Amperes. The better stability of these electrodes enables a given size to be used over a wider range of currents.

ECONOMICAL . . .

Thor-Tung's permanency, ease of operation and stability make it the most economical electrode for straight polarity, DC Heliwelding.

For full information about Airco Thor-Tung, write your nearby Airco office today.

AIRCO

AIR REDUCTION

AIR REDUCTION SALES COMPANY . AIR REDUCTION MAGNOLIA COMPANY
AIR REDUCTION PACIFIC COMPANY
REPRESENTED INTERNATIONALLY BY AIRCO COMPANY INTERNATIONAL
Divisions of Air Reduction Company, Incorporated
Offices in Principal Cities

'SUPER' is the word for Santa Fe's new luxury train...

A.C.F. takes pardonable pride in "tooting a horn" for the Santa Fe and the new Super Chief now in daily service between Chicago and Los Angeles. A.C.F.-built cars are contributing to the proud record of Santa Fe comfort and luxury with the kind of passenger equipment it takes to offer the travelling public the best of everything.

The new Super Chief introduces advanced ideas for travelling comfort... accommodations that answer every pleasurable desire. The sumptuous observation lounge built by A.C.F. in this new luxury train is an outstanding tribute to the progressive spirit behind the Santa Fe System.

American Car and Foundry Company,
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Cleveland • Philadelphia • Washington •
Pittsburgh • San Francisco

Santa Fe

a.c.f. SLEEPER-OBSERVATION CAR

Unparalleled convenience and comfort in a single car, with four drawing rooms, one double bedroom and a luxurious observation lounge. The four drawing rooms, arranged in pairs, with a door between, make possible a spacious suite for six persons...ideal for travelling executives.

OBSERVATION SECTION

Observation end of car is furnished with super-comfortable needlepoint upholstered lounge chairs. Head end of section is equipped, as shown, with attractive built-in diagonal seats and convenient triangular tables topped with pearlescent gray Formica...perfect for every informal travelling comfort and amusement.

a.c.f. SLEEPING CAR

Uncrowded, roomy accommodations that befit a leisurely trip. Arrangements include four bedrooms, four compartments and two drawing rooms alongside a continuous passageway. For the last word in comfort and spaciousness each of the two drawing rooms is equipped with a convertible sofa bed with a berth over it, plus a roomette-type berth that comes out of the partition.

BEDROOM INTERIOR

Home-like comfort is the key to bedroom accommodations which include a crosswise convertible sofa and a standard upper berth. Roomy compartments are fitted with a longitudinal seat to fold down with the bed, forming a lower berth. In addition, an upper berth of the conventional ceiling type is provided above it.

a.c.f.

CAR BUILDERS TO AMERICA'S RAILROADS

ANNUAL REPORTS

Railroad		Operating Revenues	Operating Expenses	Fixed Charges	Net Income	Current Assets*	Current Liabilities*	Long Term Debt*
Akron, Canton & Youngstown	1950	$5,051,782	$3,383,474	$321,352	$608,097	$2,389,463	$1,587,393	$3,799,880
	1949	4,570,664	3,463,129	274,200	281,727	1,618,498	1,134,593	3,964,280
Atlantic & Danville #	1950	1,465,434	1,113,409	13,400	82,472	892,063	328,689	3,927,014
	1949	454,972	444,652	5,324	59,407d	.....	.....	.....
Baltimore & Ohio	1950	402,541,895	324,575,869	19,564,002	15,037,080	112,793,832	69,002,212	597,516,494
	1949	356,708,017	293,357,575	20,005,100	6,869,826	90,882,005	53,766,506	603,180,863
Bangor & Aroostook	1950	11,605,607	8,007,414	593,801	1,269,980	4,810,610	2,326,178	14,861,360
	1949	12,996,823	9,166,052	586,625	1,303,335	4,205,760	2,034,170	15,885,639
Chesapeake & Ohio	1950	318,676,866	221,010,429	12,006,853	33,947,091	112,505,505	87,285,771	349,569,940
	1949	273,958,827	219,379,374	11,670,025	11,357,897	68,540,705	58,172,962	335,193,225
Chicago & Western Indiana	1950	†	†	2,662,909	286,047d	4,572,843	3,682,409	81,534,142
	1949	†	†	2,671,331	30,199d	4,355,860	3,503,483	80,963,017
Chicago, Rock Island & Pacific	1950	179,652,325	130,706,475	2,101,055	17,888,594	71,974,206	39,495,418	84,335,353
	1949	184,656,845	135,368,229	1,498,925	17,383,379	70,079,369	41,193,281	86,693,780
Delaware, Lackawanna & Western	1950	82,343,567	63,995,304	4,989,303	3,842,748	23,190,371	11,302,168	133,556,242
	1949	80,476,507	64,985,728	4,912,486	2,224,209	19,887,987	11,260,923	134,843,800
Fonda, Johnstown & Gloversville ..	1950	923,587	835,830	14,498	24,930d	294,432	153,243	1,102,700
	1949	876,384	854,206	15,045	44,733d	223,366	120,093	1,115,430
Illinois Central	1950	275,968,155	200,311,230	10,118,544	29,412,202	119,535,039	71,552,123	216,267,615
	1949	253,786,391	196,199,803	10,509,803	16,327,502	110,916,458	64,596,940	238,671,705
Illinois Terminal	1950	11,913,066	8,964,184	574,511	685,090	4,810,396	3,526,869	15,582,955
	1949	11,699,695	9,050,425	566,520	707,242	3,753,966	2,983,961	15,465,920
Minneapolis & St. Louis	1950	20,881,599	15,008,925	171,267	2,765,248	6,632,737	5,506,119	6,041,081
	1949	18,865,047	15,394,287	169,895	1,305,788	4,691,040	4,026,148	6,527,001
Missouri-Kansas-Texas	1950	77,582,227	55,222,888	2,385,531	6,347,668	26,764,584	16,669,238	78,961,749
	1949	75,130,317	55,444,455	2,403,298	4,870,248	21,486,490	14,373,171	78,579,237
New York Central	1950	843,925,677	704,322,454	43,213,501	19,614,125	290,603,691	167,964,726	1,026,516,880
	1949	772,167,717	666,185,878	42,744,826	13,470,641	237,552,918	122,494,083	963,237,710
New York, Ontario & Western	1950	7,101,330	6,306,996	1,512,286	1,995,800d	1,666,962	8,076,500	38,955,730
	1949	6,768,399	6,167,546	1,517,801	2,173,909d	1,250,373	7,294,622	38,946,840
Pennsylvania	1950	930,140,874	784,527,564	70,732,254	38,420,677	167,159,318	156,357,265	706,232,700
	1949	848,211,159	729,413,756	78,291,538	12,474,626	283,201,218	136,011,440	693,410,849
Savannah & Atlanta	1950	3,216,562	1,997,668	62,692	506,829	2,338,393	1,401,088	1,387,500
	1949	2,906,686	2,023,535	67,309	296,548	1,677,936	912,333	1,412,500
Wabash	1950	104,357,675	75,339,457	1,572,243	9,584,262	35,517,431	27,736,629	84,435,608
	1949	93,642,963	73,619,761	1,824,144	5,693,237	35,639,130	23,806,254	76,134,869

* On December 31
d Deficit
Under lease to Southern through July 31, 1949, hence 1949 figures are only for 5 months' operation from August 1 through December 31.
† Absorbed by joint facility account.

(Continued from page 74)

NORTHERN PACIFIC.—To assume liability for $6,900,000 of equipment trust certificates to finance in part nine diesel-electric locomotives and 850 freight cars costing approximately $8,719,160. (See *Railway Age* of March 5, page 82.) The certificates will be dated March 30, and will mature in 15 annual installments of $460,000 each, beginning March 30, 1952. Division 4's report approved a selling price for the issue of 99.4016 with interest at 2¾ per cent—the bid of Salomon Brothers & Hutzler and three associates—which will make the average annual cost of the proceeds approximately 2.86 per cent. The certificates were reoffered to the public at prices yielding from 2.1 to 2.85 per cent, according to maturity.

SEABOARD AIR LINE.—To assume liability for $2,400,000 of series J equipment trust certificates, to finance in part 600 new freight cars costing an estimated $3,216,000. (See *Railway Age* of March 12, page 106.) The certificates will be dated April 1, and will mature in 30 semi-annual installments of $80,000 each, beginning October 1, 1951. Division 4 approved a selling price of 99.038 with interest at 2¾ per cent—the bid of Halsey, Stuart & Co.—which will make the average annual cost of the proceeds approximately 2.9 per cent. The certificates were reoffered to the public at prices yielding from 2 to 2.9 per cent, according to maturity.

Dividends Declared

Atlantic Coast Line.—5% non-cumulative preferred, $2.50, semiannual, payable May 10 to holders of record April 24.

Bessemer & Lake Erie.—$1.50 preferred, 75¢, semiannual, payable April 1 to holders of record March 15.

Elmira & Williamsport.—$1.19, semiannual, payable May 1 to holders of record April 20.

Illinois Terminal.—20¢, quarterly, payable May 1 to holders of record April 10.

Waterloo, Cedar Falls & Northern.—common, 17½¢, payable April 17 and July 17 to holders of record April 3 and July 3.

Western Pacific.—common, 75¢, quarterly, payable May 15 to holders of record May 1; 5% preferred A $1.25, quarterly, payable May 15, August 15, November 15, 1951, and February 15, 1952, to holders of record May 1, August 1, November 1, 1951, and February 1, 1952.

Security Price Averages

	Apr. 3	Last Week	Last Year
Average price of 20 representative railway stocks	53.83	54.70	42.70
Average price of 20 representative railway bonds	96.00	96.80	92.75

RAILWAY OFFICERS

EXECUTIVE

L. D. Baker, formerly chief rate clerk for the UNION PACIFIC at Omaha, Neb., has been advanced to assistant to vice-president—traffic there, succeeding **Glenn M. Watson,** whose appointment as assistant freight traffic manager is reported elsewhere in this issue. Mr. Baker entered U. P. service in 1925 at Omaha in the freight traffic department. He was transferred to Chicago as freight traffic agent and served as traveling freight agent for the U. P. at Philadelphia, Pa., before returning to Omaha in 1949 as chief rate clerk.

L. D. Baker

Hugo Cervantes, general agent, passenger department, of the MISSOURI PACIFIC LINES at Mexico City, Mex., has been appointed executive representative there, succeeding **Federico Miranda,** who has resigned.

W. M. Campbell, assistant to general superintendent of the Ontario district of the CANADIAN PACIFIC, has been appointed assistant to vice-president of the Eastern region, with headquarters as before at Toronto, Ont., succeeding **Duncan M. George,** whose promotion to assistant to the president at Montreal, Que., was reported in the *Railway Age* of April 2.

Richard E. Dougherty, who has served the NEW YORK CENTRAL SYSTEM as advisory consultant and has continued as vice-president of the New York State Realty & Terminal Company in charge of Grand Central Terminal real estate since his retirement on December 31, 1948, as vice-president—assistant to president, left the N.Y.C. on March 31 to engage in private practice as a consulting engineer. Mr. Dougherty will act as consultant for Seelye, Stevenson, Value & Knecht, consulting engineers, and will have offices with them at 101 Park avenue, New York. He will continue as a member of the Commission on Renovation of the White House, and as consulting engineer for the trustee of the Long Island. Mr. Dougherty was president of the American Society of Civil Engineers in 1948 and president of Engineers Joint Council in 1949.

(Railway Officers continued on next right-hand page)

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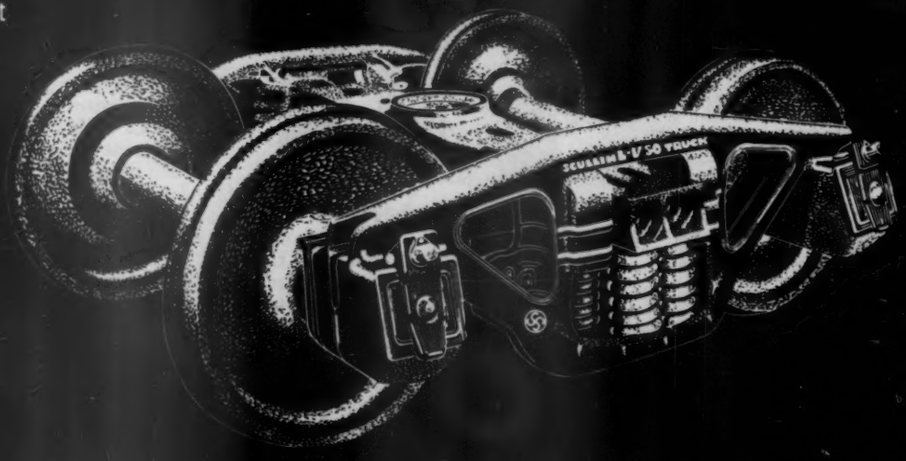

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FINANCIAL, LEGAL & ACCOUNTING

O. J. Wullstein, general freight claim agent of the UNION PACIFIC, has been appointed to the newly created post of general claims agent, with jurisdiction over general claim and freight claim matters. He will continue to be headquartered at Omaha. **James F. Cox,** general claim agent, has relinquished his position for reasons of health. Starting as an office boy in the U. P.'s freight claim department at Salt Lake City, Utah, in 1916, Mr. Wullstein advanced to freight claim adjuster before being transferred to Omaha in 1936. In 1940 he returned to Salt Lake City as freight claim agent, where he remained until his promotion to general freight claim agent at Omaha in 1946.

R. W. Spangenberg, assistant general solicitor of the CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC, has been appointed assistant general counsel, with headquarters as before at Chicago. He succeeds **O. G. Edwards,** who has retired, as reported in *Railway Age* of April 2. **James Phillip Reedy** has been appointed attorney at Chicago.

J. F. Holst, assistant to the tax commissioner and to the general manager of properties of the UNION PACIFIC since 1931, has been appointed general land and tax agent at Salt Lake City, Utah, succeeding **Ernest M. Sawyer,** who has retired.

H. G. Mesing has been appointed real estate and tax agent of the PITTSBURGH & LAKE ERIE and LAKE ERIE & EASTERN at Pittsburgh, Pa., succeeding **J. King Evans.**

William B. Johnson, assistant general solicitor of the PENNSYLVANIA, at Philadelphia, Pa., has been promoted to assistant to the general counsel.

OPERATING

F. L. Coverston, assistant superintendent of the NEW YORK CENTRAL SYSTEM at Van Wert, Ohio, has been transferred in that position to East St. Louis, Ill. He is succeeded by **E. W. Hobbs,** assistant to the assistant general manager at Indianapolis, Ind. **G. E. Maas,** assistant trainmaster at Galion, Ohio, has been advanced to trainmaster at Indianapolis.

H. A. Linderer, terminal trainmaster of the ST. LOUIS-SAN FRANCISCO at Memphis, Tenn., has been appointed assistant superintendent of safety at St. Louis, Mo.

C. V. Cowan, trainmaster of the Peninsula subdivision of the CHESAPEAKE & OHIO, has been appointed assistant superintendent of the Richmond division, with headquarters as before at Richmond, Va., succeeding **E. G. McDougle,** who has been trans-

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Your answer to that question depends greatly on how much more *steam* is wasted on your trains—this year and in winters to come. As you know, insufficient steam due to cold weather is a major reason why trains arrive late. And late trains cost you dearly in overtime, in general overhead and—above all—in loss of passenger good will.

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MINNEAPOLIS
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ferred to the Newport News and Norfolk Terminal division at Newport News, Va., a newly-created position. **F. G. Cobb,** division engineer of the Richmond division, succeeds Mr. Cowan.

T. E. Wheeler, superintendent of the CANADIAN PACIFIC at Schreiber, Ont., has been transferred to the Smith Falls (Ont.) division, succeeding **E. C. McKay,** who has retired under the company's pension rules after 51 years of service. **J. W. Harman,** assistant superintendent of the Montreal Terminals division, who has been on loan to the Algoma Steel Corporation for the past three months, will succeed Mr. Wheeler at Schreiber.

Henry Chester, inspector of transportation of the Prairie and Pacific regions of the CANADIAN PACIFIC at Winnipeg, Man., has been appointed assistant to the general superintendent of transportation at Montreal, Que.

Maxwell F. Self, superintendent terminals of the SOUTHERN at Cincinnati, Ohio, has been appointed assistant division superintendent at Gadsden, Ala., succeeding **Arch J. May,** who has retired after more than 46 years of service with this road.

TRAFFIC

William F. Vail, freight traffic manager—sales and service of the NEW YORK, ONTARIO & WESTERN, has been promoted to traffic manager, with headquarters as before at New York. **F. J. Kinney,** freight traffic manager—rates and divisions at New York, has resigned. **J. M. Hurley,** general freight agent, has been promoted to assistant traffic manager—rates and divisions. **R. J. Gallagher,** assistant general freight agent, has been promoted to general freight agent. **F. X. Biasi,** assistant to general freight agent, has been promoted to assistant general freight agent.

N. J. Gant, commercial agent of the ATLANTIC COAST LINE, has been appointed general agent, with headquarters as before at Nashville, Tenn.

Wallace S. Flint has been appointed chairman of the OFFICIAL CLASSIFICATION COMMITTEE at New York, succeeding **Albert H. Greenly,** who has retired after more than 50 years in railroad service. Mr. Greenly has been a member of the committee continuously since 1920 and chairman since 1931. In recent years he also served as chairman of the Uniform Classification Committee.

D. M. Crawford, general freight agent of the GRAND TRUNK WESTERN-CANADIAN NATIONAL, has been appointed assistant freight traffic manager. He is succeeded by **G. O. Thoresen,** assistant general freight agent. **Clarence Giles,** coal traffic

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have been specifically developed to provide highly dependable gear lubrication for traction motor drives on electric and diesel-electric locomotives; gas electric and multiple-unit cars; and many other locomotive and car lubrication requirements. Esso COBLAX is availabe in a wide range from fluid oils to semi-solid products... "tailor-made" for railroad applications.

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—keeping pace with latest engine design and developments. Esso Railroad Products are constantly being tested and improved.

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—on-the-job check-ups by Esso Sales Engineers assure dependable performance of Esso Railroad fuels and lubricants! Be sure to call on ESSO for any fuel or lubricating problem.

agent, becomes general coal agent. All three men will continue to maintain headquarters at Detroit, Mich. A native of South Bend, Ind., Mr. Crawford began railroading with the Chicago Great Western as a stenographer-clerk at Pittsburgh, Pa. Following service with the Seaboard Air Line and the Pittsburgh & Lake Erie in a similar capacity at that point, he joined the Grand Trunk there as a stenographer-clerk, and subsequently acted as traveling freight agent, commercial agent and assistant general freight agent for that road. In September 1944 Mr. Crawford became general freight agent.

Mr. Thoresen has been serving with the system for nearly 40 years, having started with the G.T.W.-C.N. as clerk in the commercial agent's office at Chicago in 1911. He became assistant general freight agent at Detroit in 1943.

Harry F. Rose, general freight agent of the CANADIAN NATIONAL, has been promoted to assistant freight traffic manager of the United States lines of the road, with headquarters as before at Buffalo, N. Y. **H. Harold Wilson,** general eastern freight agent at New York, succeeds Mr. Rose as general freight agent at Buffalo. **Bertram H. Thome,** general agent, freight department, has been promoted to foreign freight agent, with headquarters as before at New York, succeeding **H. Russell Fish,** who replaces Mr. Wilson. **O. Kenneth Daly,** general agent, freight department at Pittsburgh, Pa., has been promoted to the dual positions of general freight agent of the C.N. at Boston, Mass., and the Central Vermont at St. Albans, Vt., succeeding **W. Arnold Kember,** whose appointment as assistant general freight traffic manager of sales at Montreal was reported in the *Railway Age* of March 19. **Roderick J. MacDonald,** eastbound agent, has been promoted to general agent, with headquarters as before at New York, succeeding Mr. Thome. **Fred J. Foley,** general agent at Memphis, Tenn., has been transferred to Philadelphia, Pa., succeeding **Gordon M. Newby,** who has been transferred to Pittsburgh.

Mr. Rose was born in Prince Edward county, Ont., and joined the C.N. system in 1906 as clerk in the transportation department of the Grand Trunk at Island Pond, Vt. He became general freight agent at Buffalo in 1944.

Mr. Wilson was born at Buffalo and joined the C.N. there in 1917 as a clerk, subsequently becoming westbound agent at New York. He was appointed general agent at New York in 1940 and general eastern freight agent in 1944.

Mr. Fish was born at Toronto and entered C.N. service in 1913 as a clerk in the transportation department at Brantford, Ont. After serving at various other points, he became general agent at Philadelphia, Pa., in 1941.

"Washington calling!"

We were expecting this call. In a sense it is the people of America on the other end of the telephone. For some time they have been calling upon our government to take whatever steps are necessary to equip our fighting men for any job they may have to do.

Korea has proved the fallacy of limited preparedness. You know now that the nation is girding for survival. The people of America have said—and rightly—that private industry should provide the Armed Forces with whatever is necessary.

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RAILROAD DIESELS

and foreign freight agent at New York in 1949.

Mr. Daly was born at St. Albans, Vt., on July 10, 1899, and entered railroad service with the C.V. on August 25, 1914, as a clerk. After service with the 103rd Machine Gun Battalion, 26th (Yankee) Division, in World War I, he returned to the C.V. and in 1926 became rate and billing clerk in the C.N. freight department at New York. He subsequently served as traveling freight agent and general agent at various points.

C. A. Hall, district passenger representative of the ST. LOUIS-SAN FRANCISCO at New York, has been appointed general agent, passenger department, at Birmingham, Ala., to succeed **J. V. Flaig,** recently appointed general agent at Washington, D. C., as announced in the March 5 *Railway Age*.

Vincent G. Berdolt, foreign freight agent for the WABASH, has been appointed general agent, freight department, with headquarters remaining at New York.

P. C. Hankey, district freight agent of the GRAND TRUNK WESTERN-CANADIAN NATIONAL at Milwaukee, Wis., has been promoted to general freight agent at Chicago. **Henry W. Hanes,** general agent, freight department, at Chicago, has been transferred to Milwaukee as assistant general freight agent. **A. F. Johnson,** chief of the freight tariff bureau at Chicago, becomes general agent at Milwaukee.

W. W. Johns, traveling freight agent of the UNION PACIFIC, has been appointed general agent, with headquarters remaining at Cheyenne, Wyo., succeeding **C. E. Astler,** who becomes special representative.

Glenn M. Watson, assistant to vice-president—traffic of the UNION PACIFIC, at Omaha, Neb., has been appointed assistant freight traffic manager. Mr. Watson started service with the U. P. in 1917 as a messenger in the general freight office at Omaha and held various positions in the rate section of the traffic department until his appointment as assistant to vice-president—traffic in 1949.

Walter M. Haenssel, general freight agent of the BALTIMORE & OHIO at St. Louis, Mo., has been appointed assistant freight traffic manager at Cincinnati, Ohio. Succeeding Mr. Haenssel is **Omar K. Sanders,** assistant general freight agent at Chicago, who is in turn succeeded by **George E. Dove,** division freight agent at Pittsburgh, Pa. **Paul K. Groninger,** division freight agent at Indianapolis, Ind., moves to Pittsburgh to become Mr. Dove's successor. **Paul S. Thompson,** district freight representative at New Orleans, La., replaces Mr. Groninger. Mr. Haenssel was born at St. Louis, August 20, 1901, and attended night courses in law and finance at St. Louis College. He started with

the B.&O. in 1917 as a messenger in the accounting office in his native city. By 1927 he had advanced through a series of clerical positions to become freight representative at St. Louis. He subsequently served as a freight traffic officer at Tulsa, Okla., and Kansas City, Mo., becoming general freight agent at St. Louis in 1946.

ENGINEERING AND SIGNALING

L. P. Jones has been appointed division engineer of the UNION (part of the MISSOURI PACIFIC LINES) at Memphis, Tenn., succeeding **K. G. Williams,** who has retired after 33 years of service.

MECHANICAL

C. B. Camp, general foreman locomotive department of the CHICAGO, ROCK ISLAND & PACIFIC at El Reno, Okla., and **P. J. Biggan,** master mechanic at Goodland, Kan., have been appointed master mechanics on the Western and Missouri-Kansas divisions, respectively. Mr. Camp's headquarters are at Goodland and Mr. Biggan's, at Armourdale, Kan.

Carl A. Love, general master mechanic of the LOUISVILLE & NASHVILLE, has been appointed an assistant superintendent of machinery, with headquarters at Louisville, Ky. He is succeeded by **James W. Adams,** assistant superintendent of the South Louisville shops, who in turn is replaced by **Duane A. Gorman,** assistant to the superintendent of the same shops. A photo and biographical sketch of Mr. Love appeared in *Railway Age* of April 15, 1950, in connection with his appointment as general master mechanic.

L. R. Schuster, engineer, car construction, of the SOUTHERN PACIFIC, with headquarters at San Francisco, Cal., has retired, and is succeeded by **Norman A. Passur,** supervisor, car construction. Mr. Schuster was born at Napa City, Cal., March 12, 1883, and studied mechanical engineering through a correspondence school course. He started his career in December 1901 in the passenger car department of the S. P. at Sacramento, Cal., later holding the positions of draftsman, assistant chief car draftsman and chief car draftsman before being appointed engineer, car construction in 1940.

Mr. Passur entered service with the S. P. in April 1919 as a junior draftsman, and later became draftsman. He was appointed air conditioning engineer at San Francisco in 1936, and in 1939 was transferred to Chicago to help supervise construction of the S. P.'s second pair of "Daylights." After service in the Military Railway Service, first as captain and later as major, from 1943 to 1946, Mr. Passur returned to the S. P. as assistant engineer, car construction, becoming supervisor, car construction, in 1948.

J. H. Miller, of the mechanical department of the Toronto, Ont., Transportation Commission, has been appointed chief mechanical officer of the QUEBEC, NORTH SHORE & LABRADOR. **W. H. Durrell** is general manager, at Montreal, Que., of the new railway.

R. J. Parsons, assistant master mechanic of the NEW YORK CENTRAL at Albany, N. Y., has been appointed master mechanic at Avis, Pa., succeeding **W. R. Downs,** who has retired after 47 years of service.

L. H. Kueck, assistant chief mechanical officer of the MISSOURI PACIFIC LINES, at St. Louis, Mo., has retired. **E. C. Meinholtz,** engineer of tests, has been promoted to mechanical engineer, with headquarters as before at St. Louis. Succeeding Mr. Meinholtz is **H. M. Hoffmeister.** Mr. Kueck was born at Sedalia, Mo., July 20, 1895, and entered railroad service in April 1917 with the M. P. as a draftsman. From 1920 to 1924 he served in a similar capacity on the Texas & Pacific, subsequently return-

ing to his former post on the M. P. Later he was advanced through the positions of chief draftsman, assistant chief mechanical engineer and chief mechanical engineer, becoming assistant chief mechanical officer in February 1944.

Mr. Meinholtz was born at St. Louis, May 14, 1904, and educated in the public schools there and at Washington University, where he received bachelor and master of science degrees in mechanical engineering. He began his career with the M.P. in the summers of 1924 and 1925 as a machinist helper, and was employed by the Scullin Steel Company from August 1926 to May 1927, when he joined the M.P.'s test and inspection department as assistant chemist. Subsequently Mr. Meinholtz held various positions and in 1939 became assistant engineer of tests. From November 1942 to October 1945 he was on leave from the road serving with the U.S. Army as captain. When he returned to the M.P. in November 1945 he continued in his former post as assistant engineer of tests until his promotion to engineer of tests in August 1946.

PURCHASES & STORES

Malcolm Mainwaring, chief clerk of the CANADIAN PACIFIC's purchasing department at Montreal, Que., has been appointed assistant purchasing agent at Toronto, Ont., succeeding **E. O'N. Furlong,** who has been transferred to Winnipeg, Man. **Joe Sproson,** acting assistant purchasing agent at Winnipeg, suceeds Mr. Mainwaring at Montreal. Mr. Mainwaring joined the C.P. purchasing department at Montreal 26 years ago and became assistant purchasing agent at St. John, N. B., in 1941. During the war he worked with the Department of Munitions and Supply. Returning to Montreal in 1947, he was appointed chief clerk in the purchasing department of the C.P. in June 1950.

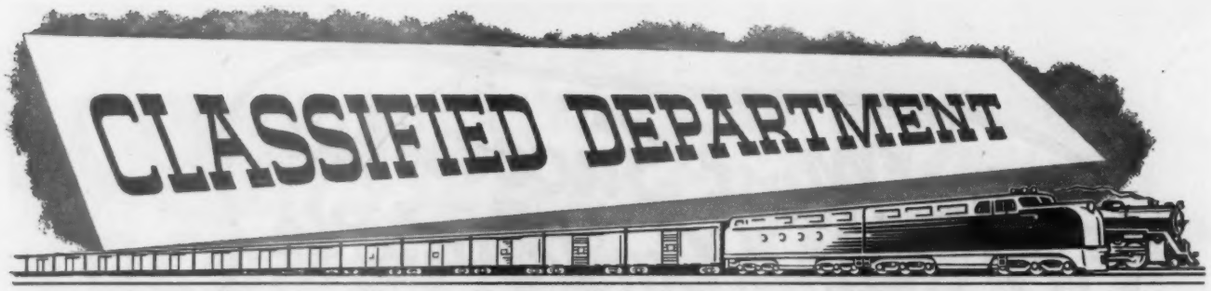
SPECIAL

John E. Slaven, assistant superintendent of safety of the CHICAGO, BURLINGTON & QUINCY, has been advanced to superintendent of safety. He succeeds the late **A. L. Davis,** whose death was reported in *Railway Age* of March 19.

J. J. Nugent, assistant advertising manager of the BALTIMORE & OHIO, has been appointed advertising manager, with headquarters as before at Baltimore, Md., succeeding **R. C. MacLellan,** who retired on April 1, after more than 50 years of service.

OBITUARY

M. J. J. Harrison, supervisor of scales and weighing of the PENNSYLVANIA at Altoona, Pa., died in that city on March 29.



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Hoppers, Triple, All-Steel, 70-Ton, Cross Dump
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EXTRA LONG FLAT CARS
40- & 50-Ton Capacity, Length 70' to 74'

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End Dump, 20-Yd., 50-Ton, Drop Door
Side Dump, 16-Yd., 40-Ton, Lift Door
Side Dump, 20-Yd., 40-Ton, Lift Door
Side Dump, 30-Yd., 50-Ton, Lift Door

STANDARD GAUGE LOCOMOTIVES

Gasoline—10-Ton to 25-Ton
Diesel-Mechanical—8-Ton to 30-Ton
Gasoline-Electric—35-Ton
Propane-Electric—70-Ton

One 50-Ton, H. K. Porter, Type 0-4-0, Oil-Fired, Steam, Built 1942

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All types of Passenger & Baggage Equipment, including Self-Propelled!

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50 ton capacity all steel twin hopper cars. Self clearing. 22 available
80 ton G. E. diesel elec. switching locomotive 500 HP
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3000 CFM Ingersoll Rand electric air compressors new 1942

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IN THIS ISSUE

THE BEARING THAT

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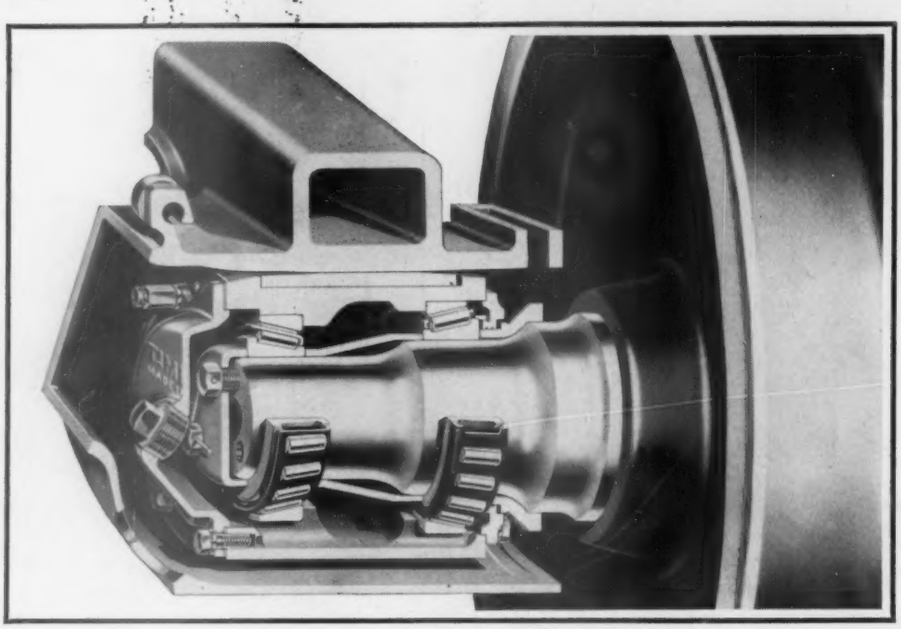
Cutaway shows way to cut operating costs . . . *all along the line!*



AT TERMINALS

With "Roller Freight"—freight trains mounted on Timken® tapered roller bearings—90% fewer man-hours are needed for terminal inspection! Lubricant, too, is saved.

IN THE SHOP

Timken bearings cut repair bills by reducing wear and tear on draft gear and other parts. Impact damage from "serial starting" jolts can be eliminated.

AT DESTINATIONS

"Roller Freight" reduces lading damage claims by making smoother starts and stops possible. Timken bearings cut starting resistance 88%!

IN THE YARDS

"Roller Freight" makes more cars available because cars get where they're going faster and spend less time in repair shops. Humping operations cannot displace parts of the Timken bearing.

ON THE ROAD

Timken bearings practically eliminate "hot boxes" and the resulting expense and delays. Timken roller bearings minimize friction, permit tighter closures to retain lubricant. And there's no waste to "grab".

ANYWHERE

You can schedule full-length trains even in cold weather. Timken bearings reduce starting friction to a minimum.

MORE BUSINESS, TOO! Besides cutting operating costs, "Roller Freight" offers you another major advantage. It will give you a big, competitive talking point with shippers in your bid for a greater share of tomorrow's freight tonnage. The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable address: "TIMROSCO".

PRICE CUT 20%

The Timken Company's cartridge journal box and bearing assembly for freight cars now costs 20% less than applications of five years ago.

TIMKEN *TAPERED ROLLER BEARINGS*

TRADE MARK REG. U. S. PAT. OFF.

NOT JUST A BALL ○ NOT JUST A ROLLER ▭ THE TIMKEN TAPERED ROLLER ▭ BEARING TAKES RADIAL ◫ AND THRUST →◫← LOADS OR ANY COMBINATION →✳←